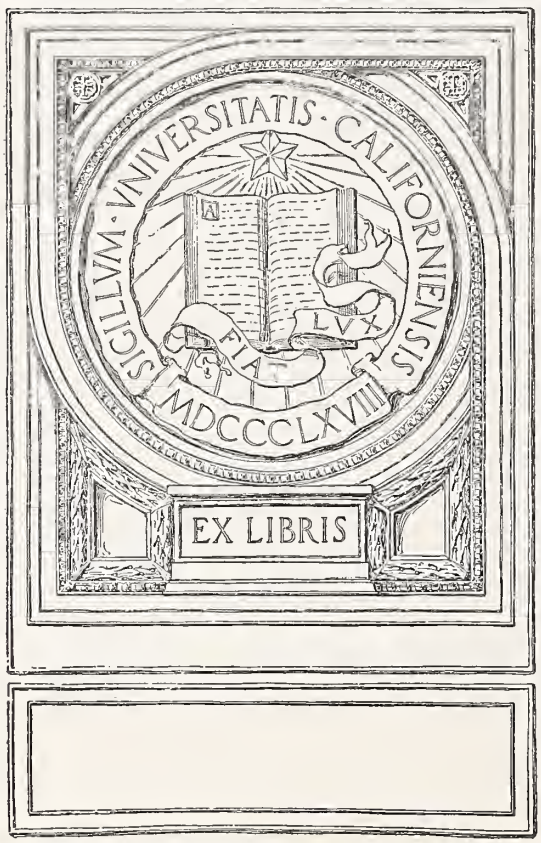
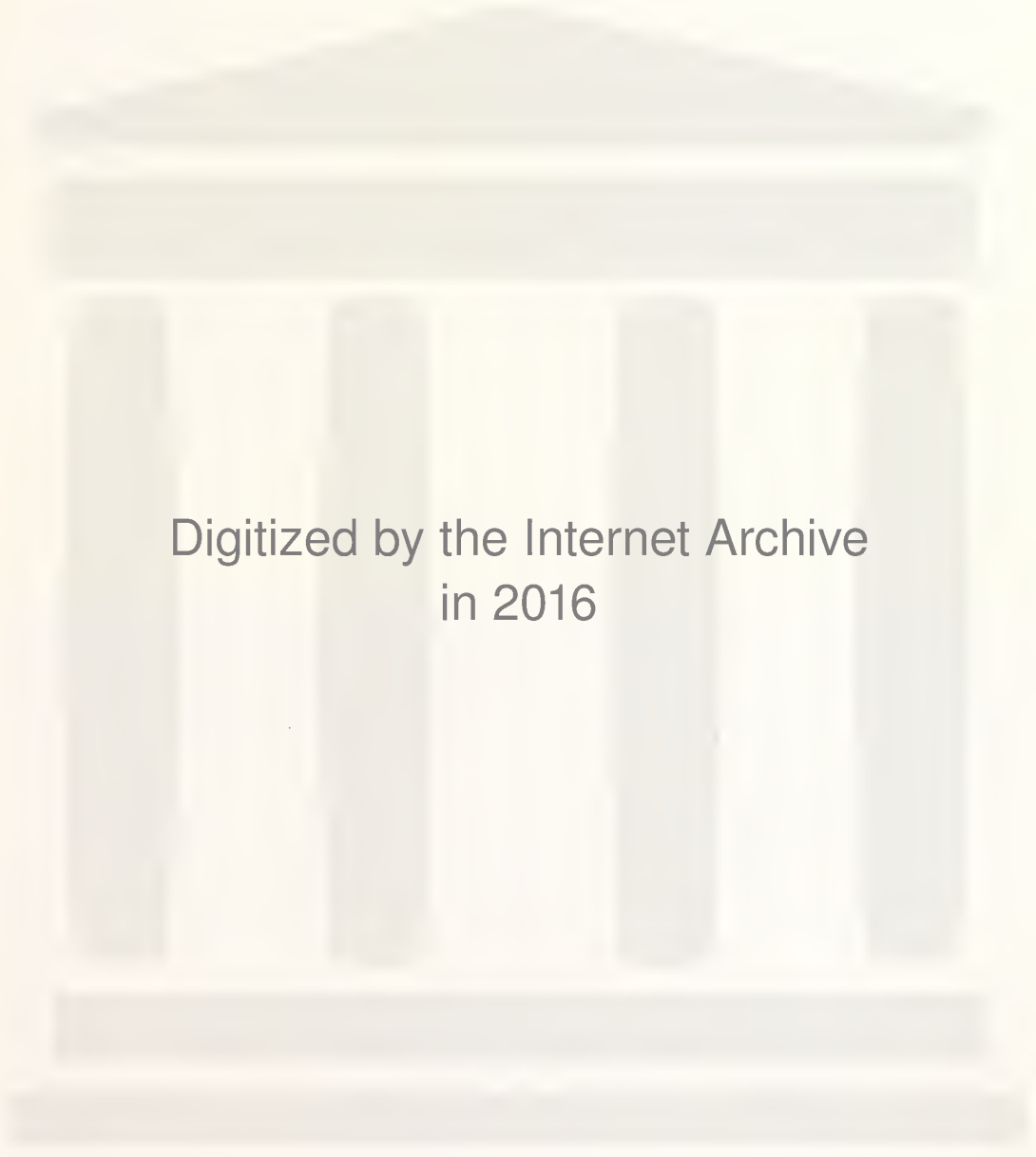
UC-NRLF
C 3 257 444

UNIVERSITY OF CALIFORNIA
SAN FRANCISCO MEDICAL CENTER
LIBRARY




Digitized by the Internet Archive
in 2016

https://archive.org/details/arizonamedicinej232unse

Arizona Medicine

JOURNAL OF ARIZONA MEDICAL ASSOCIATION
MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO

July, 1966
Vol. 23, No. 7

U.C. MEDICAL CENTER LIBRARY
JUL 21 1966
San Francisco 22,

FEATURES:

URINARY PRESSURE INCONTINENCE IN THE FEMALE 513
William E. Crisp, M.D.

PRINCIPLES OF MEDICAL ETHICS 534



205427

University of California
Medical Center Library
3rd & Parnassus
San Francisco 22, Calif.

Dilantin®
(diphenylhydantoin)

PARKE-DAVIS

27 years of clinical use... and still the most widely prescribed agent of its kind

Complete information for usage available to physicians on request. 81966

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

1866 1966 100th ANNIVERSARY

Reese, H. H.: *Wisconsin*

M. J. 15:344, 1939.
higan M. Soc. 38:317,

loran, T. H.: *Ann. Int.*

utnam, T. J.: *Arch. Neu-*
053, 1939.
l Sc. 85:986, 1939.
l, D. L., Jr., and Arnold,
nth. 66:522, 1939.

Osgood, R.: *J.A.M.A.*

nnett, C. L.: *Psychiat.*
.
Washington Bull. 3:16.

ldstein, H. H.: *Am. J.*
1940.
kson, V.: *Ann. Int. Med.*

I. M.A.J. 43:157, 1940.

Tulane Med. Fac. 1:2,

Times 69:461, 1941.
l Shallenberger, D. W.:
383, 1941.
. Bull. Veterans Admin.

et 61:178, 1941.

Rec. 155:105, 1942.
m. J. Psychiat. 98:515,

I.A. 120:449, 1942.
J. Psychiat. 99:231,

mes 70:244, 1942.
renner, C.: *J. Nerv. &*
942.
rieff, A. J.: *J.A.M.A.*

Queries & Minor Notes: *J.A.M.A.* 124:200, 1944.
Gingrass, R. P.: *Wisconsin M. J.* 43:934, 1944.
Vallotton, C. F.: *Virginia M. Month.* 71:159, 1944.

Butter, A. J. M.: *J. Neurol. Neurosurg. & Psychiat.* 8:49, 1945.
Lennox, W. G.: *M. Clin. North America* 29:1114, 1945.

Bashinsky, B.: *J.M.A. Georgia* 35:228, 1946.

Twitchell-Allen, D.: *Arch. Neurol. & Psychiat.* 57:617, 1947.
Keith, H. M.: *Am. J. Dis. Child.* 74:140, 1947.
Wigton, H. A.: *Nebraska M. J.* 32:272, 1947.
Hoefer, P. F. A.; Hoff, H. H., and Pluvinage, R. I. L.: *Tr. Am. Neurol. A.* 72:185, 1947.

Fabing, H. D., and Hawkins, J. R.: *Ohio M. J.* 44:257, 1948.
Thorne, F. C.: *Am. J. Psychiat.* 104:570, 1948.
DeJong, R. N.: *Am. Practitioner* 3:233, 1948.
Tudor, R. B.: *J. Lancet* 68:391, 1948.

Yannet, H.; Deamer, W. C., and Barba, P. S.: *Pediatrics* 4:567, 1949.
Silverstein, A.: *Am. Practitioner* 3:344, 1949.
Lennox, M. A.: *Am. J. Dis. Child.* 78:868, 1949.

Roseman, E.: *Postgrad. Med.* 8:419, 1950.
Ruskin, D. B.: *Am. J. Psychiat.* 107:415, 1950.
Chaiken, B. H.; Goldberg, B. I., and Segal, J. P.: *New England J. Med.* 242:897, 1950.

Forster, F. M.: *J.A.M.A.* 145:211, 1951.
Bakwin, R. M., and Bakwin, H.: *J. Pediat.* 39:776, 1951.
Ransone, J. T.: *Virginia M. Month.* 78:303,

Sokolova, E. I.: *Zhur. nevropat. i psikhiat.* 53:385, 1953.

Davidson, D. T., Jr., and Lombroso, C.: *New England J. Med.* 251:853, 897, 1954.
Hopkins, S. J.: *Chemist & Druggist* 161:628, 1954.
Hernandez, R., L.: *J. Am. M. Women's A.* 9:188, 1954.

Drew, A. L.: *Postgrad. Med.* 18:327, 1955.
Williams, E. Y., and Carmichael, C. P.: *J. Nat. M. A.* 47:162, 1955.
Millichap, J. G.; Lombroso, C. P., and Lennox, W. G.: *Pediatrics* 15:705, 1955.

Murphy, J. T., and Schwab, R. S.: *J.A.M.A.* 160:385, 1956.
Livingston, S.: *Postgrad. Med.* 20:584, 1956.
Gruber, C. M., Jr.; Mosier, J. M.; Grant, P., and Glen, R.: *Neurology* 6:640, 1956.
Levy, L., and Shanbrom, E.: *Arch. Int. Med.* 97:599, 1956.
Utterback, R. A.: *Am. Pract. & Digest Treat.* 7:763, 1956.
Zimmerman, F. T.: *New York J. Med.* 56:2537, 1956.

Berry, R. G., in Spiegel, E. A. (ed.): Progress in Neurology and Psychiatry, New York, Grune & Stratton, 1957, vol. 12, pp. 199-211.
Daly, D. D.: *Proc. Staff Meet. Mayo Clin.* 32:257, 1957.
French, E. G.: *Am. J. Psychiat.* 113:629, 1957.
Maltby, G. L.: *J. Maine M. A.* 48:257, 1957.

Rupp, C., Jr.: *J.A.M.A.* 166:1967, 1958.
Peterman, M. G.: *Minnesota Med.* 41:196, 1958.
Livingston, S.: *J. Lancet* 78:182, 1958.
Carter, C. H.: *Arch. Neurol. & Psychiat.* 79:136, 1958.
Keith, H. M.: *J. Lancet* 78:461, 1958.
Farmer, T. W.: *South. M. J.* 51:173, 1958.

Yahr, M. D., and Merrit
Neurol. 1:76, 1959.
Thomas, M. H.: *J.A.M.A*
Peterman, M. G., and T
Times 87:1044, 1959.
Bray, P. F.: *Pediatrics*
Mulder, D. W.; Daly, D.
and Yoss, R. E.: *Postgr.*
1959.
Forster, F. M.: *Wiscons*
1959.
Robertson, E. G.: *Postg*
1959.

Schwade, E. D.: *Geriatr*
Schade, G. H., and Gof
25:151, 1960.
Forster, F. M.: *Postgra*
1960.
Livingston, S.: *J.A.M.A*
Friedlander, W. J.: *Am.*
1960.

Kane, C. A.: *Boston Me*
1961.
Holowach, J.; Renda, Y
J. Pediat. 59:339, 196
Baker, A. B.: *J. Lancet*
Roseman, E.: *Neurolog*

Gruber, C. M., Jr.; Broc
M.: *Clin. Pharmacol. &*
Walker, A. E.: *World Ne*

Pauli, L. L.: *Maryland M.*
Livingston, S.: *Clin. Pe*
Forster, F. M.: *M. Clin.*
47:1579, 1963.
Scholl, M. L.: *New Eng.*
269:1304, 1963.

Kutt, H.; Winters, W.; H
McDowell, F.: *Arch. Ne*
Currier, R. D.: *GP* 30:1
Chao, D.; Sexton, J. A.,
J. Pediat. 64:499, 196

BSP® DISPOSABLE UNIT

BSP® DISPOSABLE UNIT

BSP® DISPOSABLE UNIT

BSP® DISPOSABLE UNIT

BSP® DISPOSABLE UNIT

BSP® DISPOSABLE UNIT

BSP® DISPOSABLE UNIT

BSP® DISPOSABLE UNIT

BSP® DISPOSABLE UNIT

A RELIABLE, PROVEN PRODUCT . . .

The BSP test, introduced in 1925, remains one of the most sensitive laboratory procedures available for determining hepatic function.

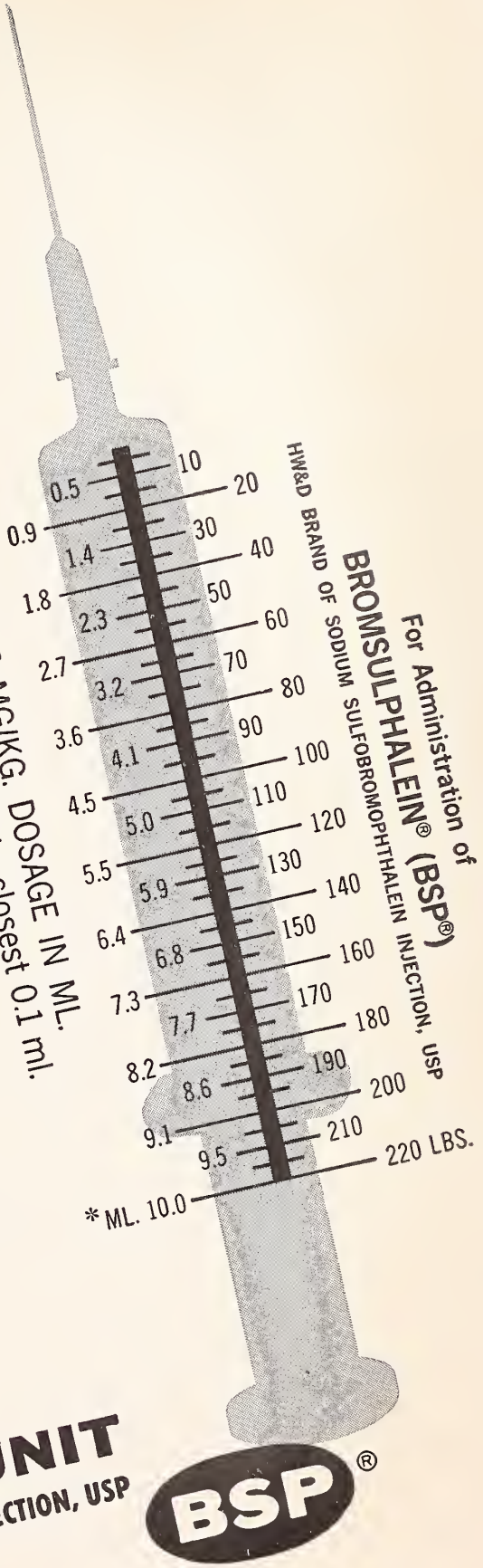
A STERILE, CONVENIENT PUT-UP . . .

Each BSP Disposable Unit contains: a sterile, glass, disposable syringe with the 5 mg./kg. BSP dosage schedule imprinted on the barrel, a sterile needle, alcohol swab and a 7.5 ml. or 10 ml. size ampule of Bromsulphalein.

The BSP unit is designed for maximum patient protection. The precalibrated syringe makes weight calculations unnecessary and provides for proper dosage regardless of patient-weight.

ECONOMICALLY PACKAGED . . .

Prepared for economic unit dispensing, this completely disposable put-up affords a savings in time and labor—the most costly commodities.



BSP® DISPOSABLE UNIT

HW&D BRAND OF SODIUM SULFOBROMOPHTHALEIN INJECTION, USP

(50 mg. per ml.)

HYNSON, WESTCOTT & DUNNING, INC.

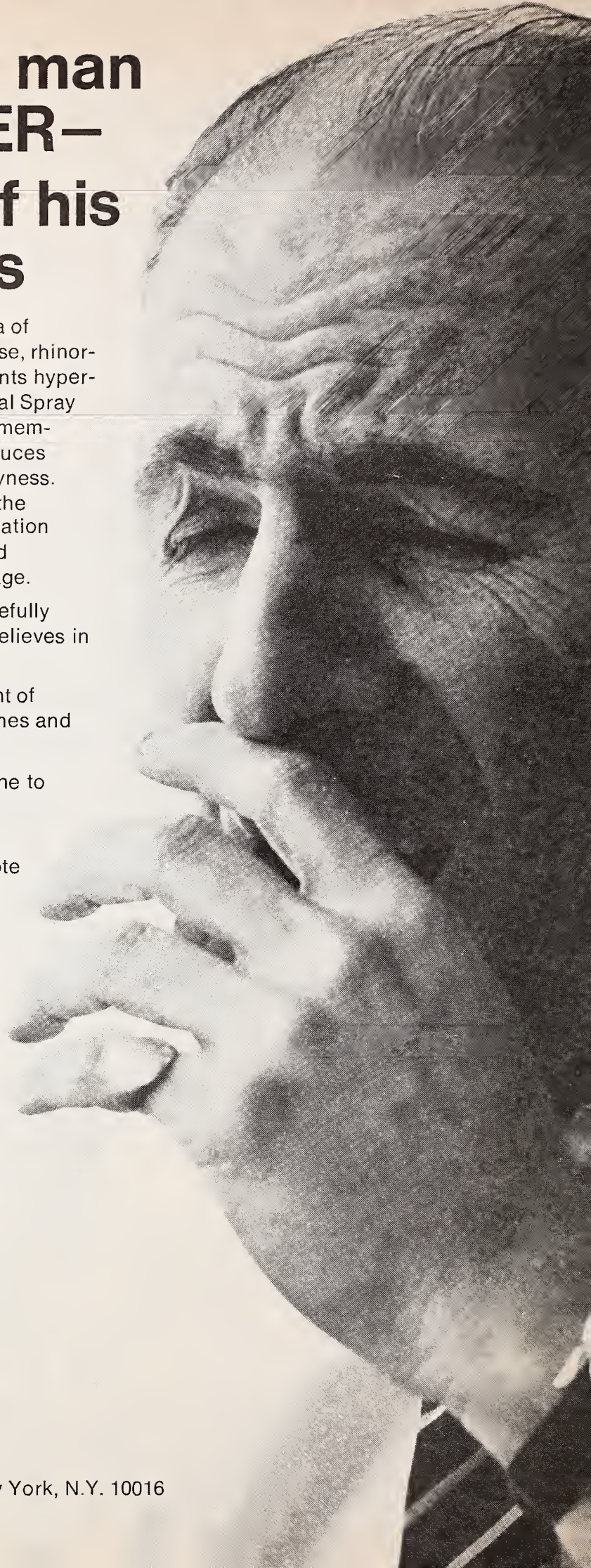
BALTIMORE, MARYLAND 21201

(BSP02)

H&D

Once merely a man with HAY FEVER—

now a victim of his own antibodies



Whatever term describes him in this new era of immunology, the symptoms of congested nose, rhinorrhea and sneezing haven't changed in patients hypersensitive to pollens and molds. But NTZ® Nasal Spray relieves the symptoms. It decongests nasal membranes on contact, relieves itching and reduces excessive rhinorrhea without unpleasant dryness. The first spray of well-tolerated NTZ shrinks the turbinates, helps restore normal nasal ventilation and breathing. After a few minutes, a second spray enhances sinus ventilation and drainage.

More than a simple vasoconstrictor, the carefully balanced formula of effective components relieves in three ways with:

- **N**eo-Synephrine® HCl 0.5%, a decongestant of unexcelled efficacy to shrink nasal membranes and allow more comfortable breathing.
- **T**henfadil® HCl 0.1%, a topical antihistamine to help relieve itching and rhinorrhea.
- **Z**ephiran® Cl 1:5000, an excellent wetting agent and antiseptic preservative to promote the rapid spread of components to less accessible nasal areas.

Supplied in convenient pocket-size plastic spray bottle of 20 ml. Also available as a solution of 30 ml. (1 fl. oz.) with dropper, and 473 ml. (1 pint).

Prescribe

NTZ® Nasal Spray

(contains Neo-Synephrine HCl)

Winthrop Winthrop Laboratories, New York, N.Y. 10016

Arizona Medicine

JOURNAL OF ARIZONA MEDICAL ASSOCIATION

MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO

July, 1966
Vol. 23, No. 7

Table of Contents

ORIGINAL ARTICLES

URINARY PRESSURE INCONTINENCE IN THE FEMALE 513
William E. Crisp, M.D.

DRUG INDUCED ULCERATION AND PERFORATION OF THE SMALL INTESTINE 517
Monroe E. Shcak, M.D., F.A.C.S., F.I.C.S.

THE COMMUNITY PESTICIDE STUDY IN ARIZONA 524
Laurence S. Maynard, M.D.
James M. Witt, Ph.D.

A STUDY OF THE EXPERIENCE OF UTILIZATION COMMITTEES 527
Elbert M. Marcom

PRESIDENT'S PAGE

ASSIGNMENT VS. DIRECT BILLING 535
Paul B. Jarrett, M.D.

DEAN'S PAGE

WE START TO BUILD 539
Merlin K. DuVal, Jr., M.D.

EDITOR'S PAGE

ETHICAL CONDUCT 543
Roland F. Schoen, M.D.

EDITORIALS

CAUTION – MEDICARE IS HERE 547
Leslie B. Smith, M.D.

IN MEMORIAM

G. CALVIN WILLIAMSON, M.D. 549

FEDERAL MEDICAL PROGRAMS 552

BLUE SHIELD

ABOUT COMMUNITY HEALTH SERVICES 555
John C. Foster

SQUAW PEAK SKETCHES 557

DIRECTORY

OFFICERS AND COMMITTEES 508
MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO 509
SOCIEDAD MEDICA DE ESTADOS UNIDOS DE NORTE AMERICA Y MEXICO 509
WOMAN'S AUXILIARY 509
INDEX TO ADVERTISERS 564

Published monthly by The Arizona Medical Association, Inc. with offices at 4601 N. Scottsdale Rd., Box 128, Suite 201, Scottsdale, Arizona 85252. Subscription $5 a year, single copy 50 cents. Entered as second class matter March 1, 1921, at Post Office at Phoenix, Arizona, Act of March 3, 1879.


And now..
PANACEA

for all you cold sufferers who've been looking for a cure-all.

They can't cure a cold. We can't cure a cold. You can't cure a cold. But what you can do is relieve the symptoms, making the patient comfortable and the cold bearable.

The patient suffering from head cold congestion, for instance, should breathe easier when you prescribe Novahistine LP.

Novahistine LP is a long-acting decongestant that helps restore normal mucus secretion and ciliary activity—physiologic mechanisms which prevent infection of the respiratory tract. Two tablets in the morning and two in the evening will provide around-the-clock relief by helping to keep congested air passages clear, thus enabling your cold patient to enjoy normal and free breathing.

Use cautiously in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Tell patients who operate machinery or motor vehicles that drowsiness may result.

Each Novahistine LP tablet contains: phenylephrine hydrochloride, 25 mg., and chlorpheniramine maleate, 4 mg.

PITMAN-MOORE
Division of The Dow Chemical Company, Indianapolis, U.S.A.

DOW

NOVAHISTINE® LP

For relief of nasal congestion.



Directory

THE ARIZONA MEDICAL ASSOCIATION, INC.
Organized 1892 P. O. Box 128
Scottsdale, Arizona 85252

OFFICERS AND DIRECTORS
1966-67

Paul B. Jarrett, M.D. President
2021 North Central Ave., Phoenix, Arizona

Arnold H. Dysterheft, M.D. President-Elect
McNary Hospital, McNary, Arizona

Arthur V. Dudley, Jr., M.D. Vice President
Bldg. 23, Medical Square, 1601 N. Tucson Blvd., Tucson, Arizona

Charles E. Henderson, M.D. Secretary
909 East Brill Street, Phoenix, Arizona

Fred H. Landeen, M.D. Treasurer
2222 North Craycroft, Tucson, Arizona

Walter Brazie, M.D. Speaker of the House
P.O. Box 631, Kingman, Arizona

Roland F. Schoen, M.D. Editor-in-Chief
1023 E. Florence Blvd., Casa Grande, Arizona

Dermont W. Melick, M.D. Delegate to AMA
909 East Brill Street, Phoenix, Arizona

William B. Steen, M.D. Delegate to AMA
116 North Tucson Blvd., Tucson, Arizona

Daniel T. Cloud, M.D. Alternate Delegate to AMA
2021 North Central Avenue, Phoenix, Arizona

Philip G. Derickson, M.D. Alternate Delegate to AMA
744 N. Country Club Rd., Tucson, Arizoona

DISTRICT DIRECTORS

Richard O. Flynn, M.D. Central District
2210 S. Mill Ave., Tempe, Arizona

W. Shaw McDaniel, M.D. Central District
461 W. Catalina Dr., Phoenix, Arizona

Robert A. Price, M.D. Central District
3602 N. 15th Avenue, Phoenix, Arizona

Noel G. Smith, M.D. Central District
3614 N. 15th Avenue, Phoenix, Arizona

Jack E. Brooks, M.D. Central District
2021 North Central Avenue, Phoenix, Arizona

Harry S. Beckwith, M.D. Northeastern District
East 2nd & Colorado Avenue, Winslow, Arizona

Hugh E. Dierker, M.D. Northwestern District
505 N. Beaver St., Flagstaff, Arizona

Deward G. Moody, M.D. Southeastern District
Stage Building, Nogales, Arizona

Warren D. Eddy, Jr., M.D. Southern District
601 North Wilmot Rd., Tucson, Arizona

Richard L. Dexter, M.D. Southern District
116 N. Tucson Blvd., Tucson, Arizona

Hermann S. Rhu, Jr., M.D. Southern District
5th Street & Alvernon Way, Tucson, Arizona

Howard W. Finke, M.D. Southwestern District
Magma Hospital, Superior, Arizona

COUNTY MEDICAL SOCIETY OFFICERS, 1966

APACHE: W. Duncan Spining, M.D., President, Sage Memorial Hospital, Ganado; Ellis W. List, Jr., M.D., Secretary, McNary Hospital, McNary.

COCHISE: Raymond Grossman, M.D., President, Drawer 1059, Douglas 85607; Jorge Gaytan, M.D., Secretary, Drawer S. Douglas.

COCONINO: Hugh E. Dierker, M.D., President, 505 N. Beaver, Street, Flagstaff; R. T. McDonald, M.D., Secretary, 713 N. Beaver Street, Flagstaff.

GILA: David B. Gilbert, M.D., President, Physicians & Surgeons Clinic, Payson; Alford D. Musgrave, Jr., M.D., Secretary, 703 Ash Street, Globe.

GRAHAM: John H. Walker, M.D., President, 702 8th Avenue, Safford; Donald E. Nelson, M.D., Secretary, 503 5th Avenue, Safford.

GREENLEE: Gerhard L. Ihm, M.D., President, Phelps Dodge Hospital, Morenci; James W. Gilbert, M.D., Secretary, P. O. Box 1537, Clifton.

MARICOPA: Ray Fife, M.D., President, 2620 N. 3rd Street, Phoenix; Charles H. Finney, M.D., Secretary, 555 W. Catalina Dr., Phoenix.
(Society Office — 2025 North Central Avenue, Phoenix)

MOHAVE: John G. Lingenfelter, M.D., President, 412 E. Oak Street, Kingman; John J. Standifer, M.D., Secretary, 412 E. Oak Street, Kingman.

NAVAJO: Claude H. Peterson, M.D., President, 1500 Williamson Ave., Winslow; Leo L. Lewis, M.D., Secretary, Santa Fe Medical Offices, P. O. Box 673, Winslow.

PIMA: Juan E. Fonseca, M.D., President, 601 N. Wilmont Rd., Tucson; Elliott E. Stearns, Jr., M.D., Secretary, 2442 E. Elm St., Tucscn.
(Society Office — 2555 East Adams Street, Tucson)

PINAL: Chalmers D. Johnson, M.D., President, 1195 N. Arizona Blvd., Coolidge; Richard F. Adamson, M.D., Secretary, Florence Medical Center, Florence.

SANTA CRUZ: Charles S. Smith, M.D., Secretary, Gebler Building, Nogales.

YAVAPAI: Dennis R. Semkin, M.D., President, 533 W. Gurley Street, Prescott; William R. Shepard, M.D., Secretary, 1003 Division Street, Prescott.

YUMA: James Volpe, Jr., M.D., President, P. O. Box 1151, Harold N. Gordon, M.D., Secretary, 1832 8th Avenue, Yuma.
(Society Address — P. O. Box 4370, Kofa Substation, Yuma)

COMMITTEES — 1966-67

NOTE: The President, President-elect and Secretary are ex-officio members of all Committees unless otherwise specified.

ARTICLES OF INCORPORATION & BY-LAWS COMMITTEE: Walter Brazie, M.D., Chairman (Kingman); Daniel T. Cloud, M.D. (Phoenix); William B. Steen, M.D. (Tucson).

BENEVOLENT AND LOAN FUND COMMITTEE: Daniel T. Cloud, M.D., Chairman (Phoenix); Donald K. Buffmire, M.D. (Phoenix); Fred H. Landeen, M.D. (Tucson); Darwin W. Neubauer, M.D., (Tucson) Albert J. Ochsner, M.D. (Yuma)

CENTRAL OFFICE ADVISORY COMMITTEE: Charles E. Henderson, M.D., Chairman (Phoenix); Arthur V. Dudley, Jr., M.D. (Tucson); Arnold H. Dysterheft, M.D. (McNary); Paul B. Jarrett, M.D. (Phoenix); Fred H. Landeen, M.D. (Tucson).

EXECUTIVE COMMITTEE: Paul B. Jarrett, M.D., Chairman (Phoenix); Arthur V. Dudley, Jr., M.D. (Tucson); Arnold H. Dysterheft, M.D. (McNary); Charles E. Henderson, M.D. (Phoenix); Fred H. Landeen, M.D. (Tucson).

GRIEVANCE COMMITTEE: Miguel A. Carreras, M.D. (Tucson); Richard E. H. Duisberg, M.D. (Phoenix); Francis M. Findlay, M.D. (San Manuel); C. Herbert Fredell, M.D. (Flagstaff); Leo L. Lewis, M.D. (Winslow); Dwight H. Porter, M.D. (Phoenix); Hermann S. Rhu, Jr., M.D. (Tucson).

HISTORY AND OBITUARIES COMMITTEE: Robert S. Flinn, M.D., Chairman (Phoenix); Walter Brazie, M.D. (Kingman); John W. Kennedy, M.D. (Phoenix); Harold W. Kohl, Sr., M.D. (Tucson); Maurice Rosenthal, M.D. (Phoenix); Roland F. Schoen, M.D. (Casa Grande); Jay L. Sitterley, M.D. (Flagstaff).

INDUSTRIAL RELATIONS COMMITTEE: Morris E. Stern, M.D., Chairman (Phoenix); John F. Currin, M.D. (Scottsdale); Derald G. May, M.D. (Phoenix); Hal W. Pittman, M.D. (Phoenix); Thomas H. Taber, Jr., M.D. (Phoenix); Stanley S. Tanz, M.D. (Tucson).

LEGISLATIVE COMMITTEE: Carlos S. Craig, M.D., Chairman (Phoenix).

MEDICAL ECONOMICS COMMITTEE: Ian M. Chesser, M.D., Chairman (Tucson); Harvey G. Brown, M.D. (Phoenix); Richard G. Hardenbrook, M.D. (Prescott); George L. Hoffman, M.D. (Mesa); John H. Ricker, M.D. (Phoenix); Clarence L. Robbins, M.D. (Tucson); Steven S. Spencer, M.D. (Flagstaff); Elmer E. Yeoman, M.D. (Tucson).

PROCUREMENT AND ASSIGNMENT COMMITTEE: Joseph M. Greer, M.D., Chairman (Phoenix).

PROFESSIONAL COMMITTEE: William G. Payne, M.D., Chairman (Phoenix).

PUBLIC RELATIONS COMMITTEE: Arnold H. Dysterheft, M.D., Chairman (McNary); John S. Carlson, M.D. (Phoenix); William J. Clemans, III, M.D. (Florence); Arthur V. Dudley, Jr., M.D. (Tucson); C. Herbert Fredell, M.D. (Flagstaff); William F. Holsey, M.D. (Tucson); John F. Kahle, M.D. Flagstaff); J Edwin Keppel, M.D. (Mesa); Laurence M. Linkner, M.D. (Phoenix); William H. Lyle, M.D. (Yuma); William W. McKinley, Jr., M.D. (Bisbee).

PUBLISHING COMMITTEE: Roland F. Schoen, M.D., Chairman (Casa Grande); Chester G. Bennett, M.D. (Phoenix); R. Lee Foster, M.D. (Phoenix); John R. Green, M.D. (Phoenix); William M. Hindman, M.D. (Tucson); Robert F. Lorenzen, M.D. (Phoenix); William B. McGrath, M.D. (Phoenix); Preston J. Taylor, M.D. (Tucson).

SCIENTIFIC ASSEMBLY COMMITTEE: Edward Sattenspiel, M.D., Chairman Phoenix); Warren A. Bennett, M.D. (Phoenix); Edward H. Bregman, M.D. (Phoenix); Daniel Bright, M.D. (Cottonwood); John S. Carlson, M.D. (Phoenix); John F. Currin, M.D. (Scottsdale); Arthur V. Dudley, Jr., M.D. (Tucson); Alan L. Gordon, M.D. (Phoenix); T. Richard Gregory, M.D. (Phoenix); Richard T. McDonald, M.D. (Flagstaff); Richard J. Martin, M.D. (Tucson); Deward G. Moody, M.D. (Nogales); Arthur R. Nelson, M.D. (Phoenix); Paul J. Nichols, M.D. (Phoenix); Melvin W. Phillips, M.D. (Prescott); Reginald J. M. Zeluff, M.D. (Phoenix).

WOMAN'S AUXILIARY TO THE ARIZONA MEDICAL ASSOCIATION — 1966-67

President Mrs. Robert G. Delph (Grace)
2019 North Crescent Drive, Flagstaff, Arizona

President-Elect Mrs. Elvie B. Jolley (Mila)
Box 919, Bisbee, Arizona

1st Vice President Mrs. Richard Hardenbrook (Kaaren)
316 Grove Avenue, Prescott, Arizona

2nd Vice President Mrs. Charles Matheus (Marilyn)
2148 East 25th Street, Yuma, Arizona

Secretary Mrs. Richard Timmons (Evelyn)
5302 N. 69th Place, Scottsdale, Arizona

Treasurer Mrs. James Parsons (Carolyn)
5251 E. Hawthorne Pl., Tucson, Arizona

Director Mrs. James B. Tucker (LaVerne)
700 East 10th Street, Casa Grande

WOMAN'S AUXILIARY STANDING COMMITTEE CHAIRMEN — 1966-67

AMA-ERF Mrs. Jay Sitterley (Helen)
2319 Lantern Lane, Flagstaff, Arizona 86001

By-Laws Mrs. Robert Mason (Doris)
330 West Maryland, Apt. 107, Phoenix, Arizona

Chaplain Mrs. Clair Troutman (Bernadine)
225 N. Fraser Drive E., Mesa, Arizona 85201

Community Service Mrs. R. Franklyn Johns (Lucille)
2355 Chico Lane, Yuma, Arizona

Convention Mrs. Lewis Winter (Jean)
1714 E. Rose Lane, Phoenix, Arizona

Finance Mrs. Herman S. Rhu (Ruth)
2138 E. Juanita, Tucson, Arizona

Hamer Educational Loan Fund Mrs. Mayer Hyman (Betty)
4766 E. Calle Chueca, Tucson, Arizona

Health Careers Mrs. William Scott (Jean)
340 S. Country Club Road, Tucson, Arizona

Historian Mrs. Melvin Phillips (Jean)
1001 Norris Road, Prescott, Arizona

Legislation Mrs. George Enfield (Rowena)
1266 East Cambridge Avenue, Phoenix, Arizona

Mental Health Mrs. Philip Windrow (Mildred)
1929 E. Claremont, Phoenix, Arizona

Parliamentarian Mrs. Jesse D. Hamer (Clarice)
1890 N. 11th Avenue, Phoenix, Arizona

Publications Mrs. William Minturn (Shirley)
6034 N. 38th Place, Phoenix, Arizona

Rural Health Mrs. Leo Schnur
Box 196, Sedona, Arizona

Safety Mrs. Paul Jarrett (Beverly)
501 East Pasadena Avenue, Phoenix, Arizona

SOCIEDAD MEDICA DE ESTADOS UNIDOS DE NORTE AMERICA Y MEXICO
MEDICAL SOCIETY OF THE UNITED STATES & MEXICO

President Dr. L. Maxwell Lockie
130 Morris Avenue, Buffalo 14, New York

President-Elect Dr. Alfonso Topete Duran
Edificio Professional, Juarez y Pavo, Guadalajara, Jalisco, Mexico

Vice President Dr. James Nauman
1603 North Tucson Boulevard, Tucson, Arizona

Secretary for the United States Dr. Earl J. Baker
550 West Thomas Road, Phoenix, Arizona

Secretary for Mexico Dr. Felix Michel
Pavo 112, Guadalajara, Jalisco, Mexico

Treasurer for the United States Dr. Lucy A. Vernetti
333 West Thomas Road, Suite 207, Phoenix, Arizona

Treasurer for Mexico Dr. Eduardo Gonzalez Murguia
Juarez 673, Guadalajara, Jalisco, Mexieo

Executive Secretary for Mexico Mr. Alfredo E. Patron
Mazatlan, Sinaloa, Mexico

FOR YOUR PERMANENT FILE



HANDSOME, DURABLE WHITE & GOLD VINYL COVERED BINDERS TO PRESERVE PAST ISSUES OF ARIZONA MEDICINE. EACH BINDER HOLDS UP TO TWELVE ISSUES.

ONLY $3.00 EACH

Arizona Medicine

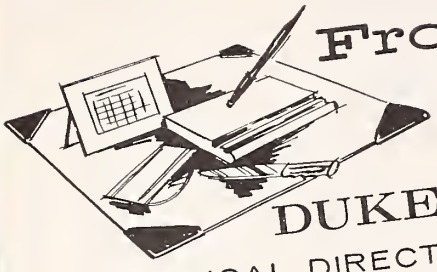
p.o. box 128 scottsdale, arizona 85252

Name _____

Address _____

PLEASE SEND _____ BINDERS

I understand that these will be billed to me at the rate of $3.00 each.



From The Desk Of

DUKE GASKINS, M.D.

MEDICAL DIRECTOR, HBA LIFE INSURANCE CO.

Doctor:

Let's get one thing straight –

HBA's schedule of surgical benefits, while quite generous, in no way, and we repeat, in no way, attempts to set your fee.

It simply states what HBA will pay for a given surgical procedure. It is a necessary tool for the company in order to provide specific benefits.

But your fee, doctor, is between you and your patient.

Duke

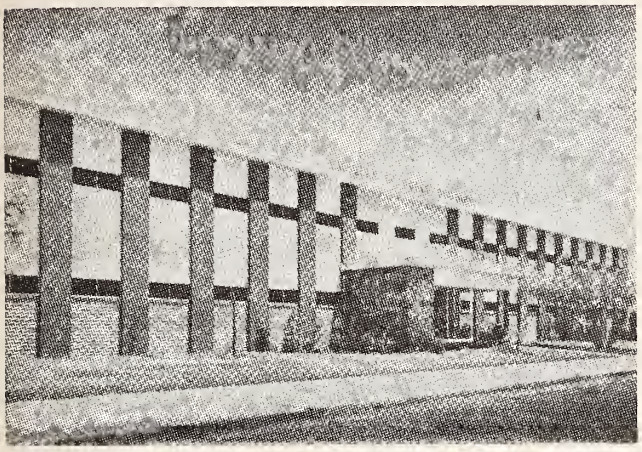
THE HBA LIFE

INSURANCE COMPANY

GROWING WITH THE ELEVEN WESTERN STATES

Baptist Medical Center

HOSPITAL MEDICAL CENTER, LTD.



100 E. FOURTH ST. SCOTTSDALE, ARIZONA

Adjoining Scottsdale Baptist Hospital

ANESTHESIOLOGIST
Sue Boyett, M.D.
FAMILY DOCTOR
Jack E. Groh, M.D.
William B. McGahey, M.D.
John A. Martin III, M.D.
Edward A. Wilson, M.D.
GENERAL SURGERY
Boyd H. Metcalf, M.D.
George H. Mertz, M.D.
Jack O. McFarland, M.D.
GENERAL SURGERY — CANCER
Herbert N. Munhall, M.D.
INTERNAL MEDICINE & CARDIOLOGY
John F. Currin, M.D.
OBSTETRICS & GYNECOLOGY
Roy O. Young, M.D.
OPHTHALMOLOGY
Peter S. Sykowski, M.D., F.A.C.S.
Robert L. Yockey, M.D.
eye physician and surgeon
ORAL SURGERY
Ralph G. Peterson, D.D.S.
ORTHODONTIST
James C. Toye, D.D.S.
ORTHOPEDIC SURGERY
Edward E. Conn, M.D.
Malcolm F. Dorfman, M.D.
Willard S. Hunter, M.D.
PATHOLOGY
Thomas B. Jarvis, M.D.
Fred C. Schoene, M.D.
PERIODONTIST
J. Richard Loughry, D.D.S.
PLASTIC SURGERY
Morris Barton, M.D.
THORACIC CARDIOVASCULAR SURGERY
Carl Impellitier, M.D.
UROLOGIC SURGERY
Wilfred M. Potter, M.D.
RADIOLOGY
M. Herbert Nathan, M.D.
DENTISTRY
Lumone E. Willmeng, D.D.S.
OTHERS
Jean Hoffman, Reg. Physical Therapist
Pharmacy
Scottsdale Opticians

For Leasing Information Call
946-9091 or 946-5344

What Doctors Should Know About 5% Certificates of Deposit and 4% Daily Interest Savings Accounts

First National Bank Certificates of Deposit earn 5% per year and may be purchased in amounts of $1,000 or more. If you can invest your money for six months or longer, then CD's can be the smart investment for you.

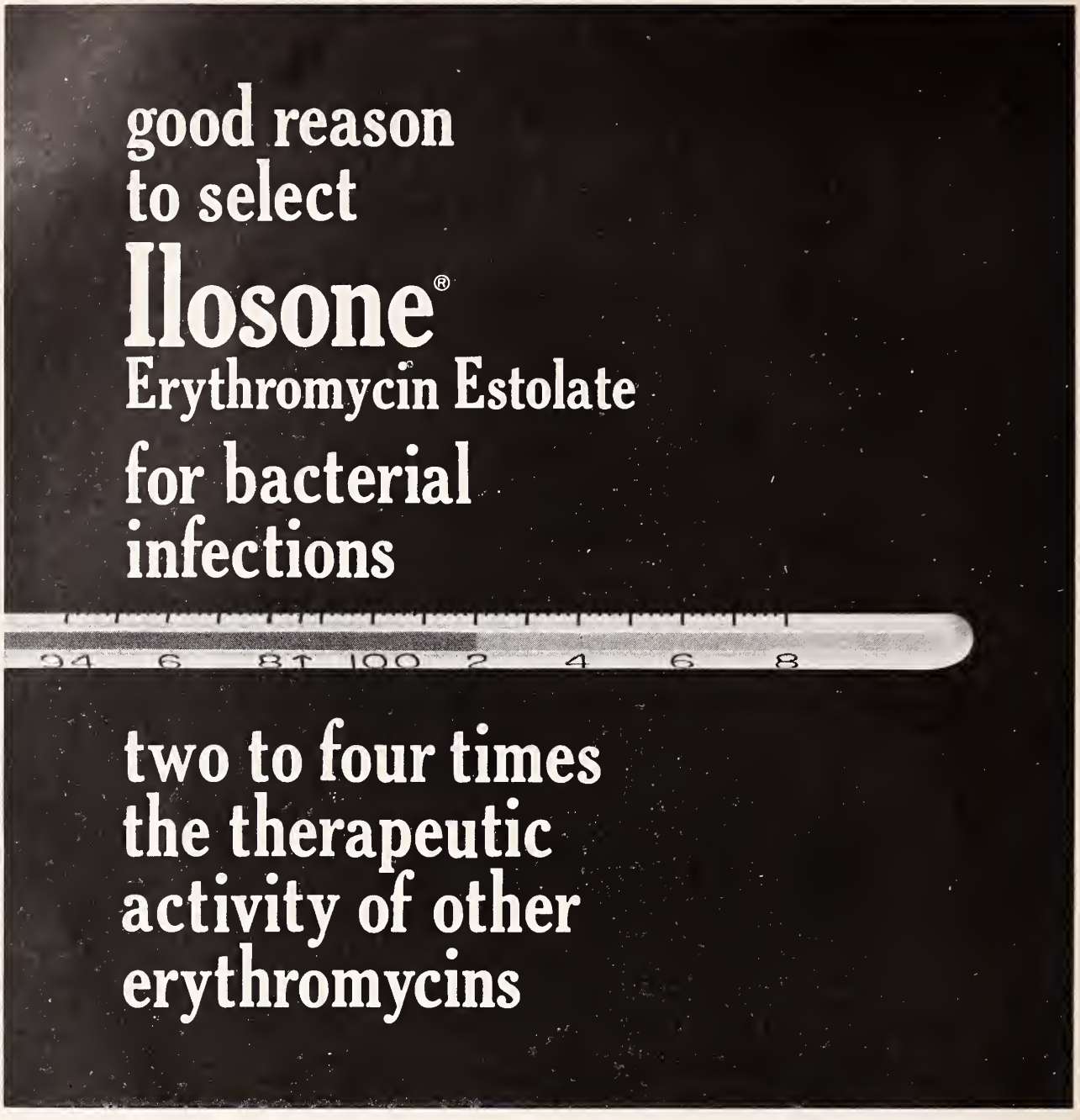
First National Bank Savings Accounts earn Daily Interest at the rate of 4% per year immediately from the first day of deposit and are suggested if you wish a flexible savings plan, which will allow you to deposit or withdraw at any time.

There is a difference, other than interest rates, in these two plans. Your First National Banker will be happy to assist you in selecting the savings program that best fits your needs. Just stop by the nearest office of the bank where you come first.

1st FIRST NATIONAL BANK OF ARIZONA

MEMBER F.D.I.C. • FEDERAL RESERVE SYSTEM

the bank where you come first!



CONTRAINDICATIONS: Ilosone is contraindicated in patients with a known history of sensitivity to this drug and in those with preexisting liver disease or dysfunction.

SIDE-EFFECTS: Even though Ilosone is the most active oral form of erythromycin, the incidence of side-effects is low. Infrequent cases of drug idiosyncrasy, manifested by a form of intrahepatic cholestatic jaundice, have been reported. There have been no known fatal or definite residual effects. Gastro-intestinal disturbances not associated with hepatic effects are observed in a small proportion of patients as a result of a local stimulating action of Ilosone on the alimentary tract. Although allergic manifestations are uncommon with the use of erythromycin, there have been occasional reports of urticaria, skin eruptions, and, on rare occasions, anaphylaxis.

DOSAGE: *Children under 25 pounds*—5 mg. per pound of body weight every six hours. *Children 25 to 50 pounds*—125 mg. every six hours. *Adults and children over 50 pounds*—250 mg. every six hours. For severe infections, these dosages may be doubled.

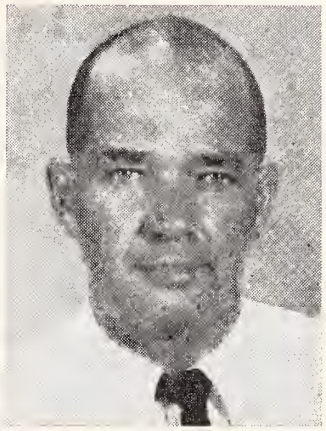
Available in Pulvules®, suspension, drops, and chewable tablets. Ilosone Chewable tablets should be chewed or crushed and swallowed with water.

Additional information available to physicians upon request.
Eli Lilly and Company, Indianapolis, Indiana 46206.

Lilly

600541

Urinary Pressure Incontinence in the Female



William E. Crisp, M.D.

Urinary pressure incontinence in the female is a frequent and sometimes difficult problem. In an article written especially for ARIZONA MEDICINE, Dr. William E. Crisp presents a concise but complete investigation into the etiology of stress incontinence based on demonstrable anatomic defects. Dr. Crisp applies these findings in his recommendations for its prevention and treatment.

URINARY pressure incontinence, which is more commonly known as stress incontinence, is defined as an abrupt involuntary loss of urine from the urethra associated with sudden increases in intra-abdominal pressure, usually while in the upright position. This type of involuntary incontinence has also been known as orthostatic exertional or diurinal incontinence, all of which helps describe the typical situation in which the patient, without any local sensation to warn her, loses urine when she voluntarily or involuntarily increases intra-abdominal pressure. The term "pressure incontinence" will be used in this discussion not to further confuse the literature, but to emphasize the basic mechanism of this type of incontinence.

Department of Obstetrics and Gynecology
Maricopa County General Hospital
Phoenix, Arizona

The Anatomy and Physiology of Urinary Pressure Incontinence

Pressure incontinence is mainly concerned with the anatomy of the vesicle neck and the urethra, and their coordinate action. Anatomic, physiologic and radiologie studies clearly indica'e that there are no true sphincters of the urethra. The destrusor muscle of the bladder continues uninterruptedly from the dome of the bladder to the distal end of the urethra, and decussates both posteriorly and anterioly around the urethral orifice. This decussation of the detrusor muscle has been termed the "lisso sphincter" which opens the vesicle end of the urethra on contraction, and closes it with relaxation. The detrusor muscle contracts in the same manner as the uterus in labor, forcing the urine against the proximal portion of the urethra causing the "funneling" that initiates micturition.

The shape and function of the urethra are modified by the connective tissue supports, vascular investments and the fibers contributed by the levator ani muscles known as the pubococcygeus muscles.

The urethra may be considered to have two distinct segments. The urethrovesicle segment is made up of the posterior urethra and a small portion of the adjacent bladder neck as described above. The second segment is a comparatively short midurethral segment which has the fibrous attachments (pubo-urethral ligaments) from the pubococcygeus muscles. This area is also called the external sphincter.

There is no true histologic fascia in the anterior vaginal wall, simply the loose aerolar fascia which lies between the bladder wall and the vaginal mucosa which allows the easy dissection of these two layers. True fascia in the anterior vaginal wall would actually be a hazard when you consider the necessity of having to accommodate the fetal head during pregnancy and delivery.

The hydrodynamics of micturition and stress incontinence may be summarized as follows:

1) The intracystic pressure is equal to, or slightly greater than, an intra-abdominal pressure under normal conditions, regardless of the degree of filling. It measures approximately 2 mm. Hg.[2, 4]

2) Intracystic pressure rises immediately and directly as the intra-abdominal pressure increases. This occurs whether the bladder is in normal position or in marked prolapse, since the law of hydrostatics (Pascal's Law) states that when an external pressure is applied to the wall of a container of fluid, this pressure is transmitted equally in all directions.[11]

3) Under conditions of rest, the pressure within the urethra is greater (2-6 mm. Hg) than the intracystic pressure. The pressure within the urethral segment rises proportionately to the increase in intracystic pressure. These observations first made by Enhorning[4], and recently confirmed by Beck and Maughan[2], show that stress incontinence cannot occur without some incompetence of the urethral segment. Urethral pressure depends not only on the involuntary resistance, which includes the urethral mucosa, peri-urethral tissues and vasculature, but also on the voluntary resistance of the mid-portion of the urethra and the pubo-urethral ligaments. The patient will not be incontinent as long as the voluntary muscular segment functions normally, maintaining the combined pressure of the urethra greater than the intravesicle pressure with or without additional intra-abdominal pressure that is associated with stress of coughing, etc.

Many investigators have stated that the problem of stress incontinence is centered around the loss of the posterior urethrovesicle angle.[12] These authors give the impression that in order to be continent, the female must have an angle of obstruction that prevents incontinence but which she may lower to void. The loss of the posterior vesicle angle is only a sign of, not the cause of, stress incontinence. Resistance of flow in any tubular structure is inversely proportional to the diameter of the pipe, and directly proportional to its length. Angulation of the pipe does not significantly change this principle. There is, of course, a degree of back-thrust of the urinary stream at the point of angulation, but it is insignificant.[11]

To reiterate, intra-urtheral pressure is dependent upon good support of both segments of the urethra. Keeping in mind the many variables that occur during micturition, involuntary loss of urine occurs when intravesicle pressure is greater than intra-uretheral pressure.

Diagnosis

Certainly anyone confronted with the symptoms of involuntary loss of urine should always consider such things as urge incontnence, diverticuli, fistula, overflow incontinence secondary to central nervous system lesions, etc. This discussion is strictly confined to pressure incontinence, as previously defined.

Barring the incontinence that follows complications of some gynecological surgery, this type of urinary incontinence is usually seen in three groups of women: during pregnancy, the multiparous patient and the menopausal patient.[8]

During pregnancy the incontinence is caused by a decrease in intra-urethral pressure secondary to the softening and congestion of the supporting structures, along with a static increase in intracystic pressure and decreased bladder capacity due to the enlarging uterus.

Incontinence in the multiparous patient and the patient who has had surgery is usually secondary to loss of mobility of the urethra and a weakening of the peri-urethral supportive structures, along with atrophy of disuse of the pubo-urethral ligaments.

In the menopausal patient, the urinary incontinence can occur without much anatomical change secondary to the loss of tissue turgor and resultant decrease in intra-urethral pressure by mucosal atrophy, secondary to a decrease in estrogen.

Diagnosis of urinary stress incontinence usually can be made with a high degree of accuracy on the basis of history alone. Most authors agree that 20% of women have occasional stress incontinence, but unless it is severe it is usually not mentioned unless the patient is directly asked. Certainly the physician will distinguish a simple pressure incontinence from all other types of incontinence by illiciting any history of repeated cystitis, hematuria, back problems, etc.

The history then must be augmented by a complete physical and pelvic examination. A vaginal examination will usually yield confirmatory evidence. The external genitalia are observed for any signs of atrophy, scarring or fibrosis. The vaginal wall should be assessed for relaxation and any signs of scarring. Attention should be given to perineal support, particularly the strength and mobility of the levator ani muscles. The patient should be asked to forcibly contract these muscles while the physician estimates their contractility by direct palpation. The patient is then asked to bear down, and the degree of displacement of the vaginal wall is evaluated. It must be emphasized that the degree of incontinence is not proportional to the amount of anatomic relaxation. The patient with a large cystocele can have a minimal amount of incontinence if the periurethral structures are intact. Whereas, a woman with very little bladder defect can have marked incontinence with a flaccid, incompetent urethra. The term "urethrocele" has been used to designate a downward and outward bulging of the anterior vaginal mucosa overlying the urethra. This is a misnomer since there is no associated cavity of the urethra. It would be much better termed urethral displacement or urethral saculation.

If the patient does not have a large anatomic defect of the anterior wall, it is sometimes difficult to ascertain her incontinence unless she is in the upright position. If there is still doubt as to whether the patient does have incontinence, it is then wise to fill the bladder with approximately 200 cc. of saline and ask her to strain.

The use of the finger test (Bonney test), which is merely placing two fingers on either side of the urethrovesicle neck and pushing superiorly and posteriorly, is really of no diagnostic value since it merely shows that by increasing the length of the urethra, and thereby increasing the intra-urethral pressure, the patient is continent. Another test that is advised, but which is of no real diagnostic or practical value, is that of measuring the urethral length. Certainly it has been shown that there is continence by increasing the urethral length, but this is primarily due to the fact that narrowing the diameter of the urethra will thereby increase intra-urethral pressure. Cystoscopy, urethroscopy and cystometric studies, along with chain cystograms, are of no practical value in the diagnosis of pressure incontinence. These are merely academic additions which reiterate an anatomic situation that is usually obvious to the examiner.

Treatment

Prophylaxis is the best treatment of urinary pressure incontinence. During pregnancy, women should be instructed in how to contract their perineal muscles, which are the Kegel exercises.[6] We tell them to stop their urinary stream while voiding several times until they have educated themselves as to which muscles they are using. Thereafter they are to contract these muscles five times after each time they have finished voiding. Most women dislike doing this exercise since it involves muscles they ordinarily do not use. Patients are also warned that no progress can be expected unless they are persistent with these exercises from six to eight weeks. After delivery, Kegel exercises are included in their postpartum routine, and we reiterate to the patient that this is the exercise they must do as regularly as they do their other exercises to regain their former figure. Once these muscles have reached sufficient tone, then the exercise only has to be done at periodic intervals.

All surgical patients are instructed to do these exercises preoperatively, and then are encouraged to do them postoperatively for better long-term results.

The exact type of operative procedure that is done to cure pressure incontinence may take many forms. The fact that there are 53 different types of surgical procedures that have been recommended for this condition suggests that there have been many surgical failures. Many of these have failed because of the lack of accurate diagnosis, and a certain portion of

them fail because of poor tissue turgor and patient activity that caused the condition originally. Additional operations fail because the operator failed to pay sufficient attention to the peri-urethral tissues and the urethrovesicle junction.

The majority of operations that are described for use in the vaginal route are simply a plication of the cystocele, along with plication of the peri-urethral tissues.[7]

Those operations which utilize the abdominal approach alone, or combined with the vaginal approach, are divided into two groups. The Ball procedure[1] plicates the peri-urethral tissues and the urethrovesicle junction on the superior portion of the bladder.

The Marshall-Marchetti-Krantz[9, 10] type of procedure increases intraurethral pressure, increasing the urethral length by fixing the peri-urethral tissues to the periosteum in the posterior portion of the pubis; or Cooper's ligament and the dome of the bladder to the rectus fascia.

With the vaginal approach or abdominal approach, or a combined procedure, almost 100% of these anatomic lesions can be corrected with an immediate cure rate of over 90%, and a longer cure rate of over 80%. Continued use of perineal exercises aid materially in maintaining a successful result. In the menopausal patient, the addition of estrogen is also advised to maintain tissue turgor and mucosal integrity.

Intra-urethral pressure has also been increased sufficiently to maintain urinary continence by the para-urethral injection of Telfon in those patients who are inoperable because of associated medical problems.[5]

Summary

Urinary pressure incontinence in the female results when intravesicle pressure is greater than intra-urethral pressure. The basic mechanisms in the pathophysiology of this problem are outlined, and the major methods of treatment enumerated.

REFERENCES

1. Ball, T. L.: Gynecologic Surgery and Urology, Mosby, St. Louis, 1963.
2. Beck, R. P. and Maughan, G. B.: Am. J. Obst. & Gynec. 89-746, 1964.
3. Crisp, W. E.: Obstetrics & Gynecology, 26-918, 1965.
4. Enhorning, G. L.: Acta chir. Scandinav. 1:68, 1961 (Suppl. 276).
5. Harper, J. M.: Personal communication.
6. Kegel, A. H.: JAMA, 146:915, 1951.
7. Kennedy, W. T.: Am. J. Obst. & Gynec. 52:206, 1946.
8. Kimbrough, R. A.; Gynecology, J. B. Lippincott, Philadelphia, 1965.
9. Krantz, K. E.: Am. J. Obst. & Gynec. 62:374, 1951.
10. Marchetti, A., Marshall, V. E., Shultis, L. D.: Am. J. Obst. & Gynec. 74:57, 1957.
11. Prandtel, L.: Essentials of Fluid Dynamics. Hafner & Sons, New York, 1961.
12. Ullery, J. C.: Stress Incontinence in the Female. Grune and Stratton, New York, 1953.

Drug Induced Ulceration and Perforation of the Small Intestine

Considerable interest has centered in recent years on idiopathic ulceration and perforation of the small bowel as more and more causes have been found among the newly developed drugs such as indocin, and some diuretics. The personal experience of the author in five cases reported here is a valuable addition to our appreciation of the presence of this problem.



Monroe E. Shack, M.D., F.A.C.S., F.I.C.S.

THE surgical literature, for the past two years, has reported an increasing number of cases of small intestinal obstruction, hemorrhage and perforation. This pathological entity is not associated with previous surgery, trauma or vascular thrombotic or embolic disturbances. Pathologically, a non-specific ulceration or annular fibrosis or perforation has been found on exploratory laparotomies and microscopic examinations on the resected small intestinal tissue.

Non-specific ulcerations of the small intestine were first described by Baille in 1805 and since then rarely reported. A review of the literature by Watson[1] revealed only 170 cases reported to 1964. In early 1964 a few scattered cases were reported of similar nature, in patients receiving various diuretics, and/or enteric-coated potassium chloride capsules. In September and November 1964, papers by Nyman and Raf from Stockholm, and Baker et al[2], suggested a possible etiology between thiazide diuretics with enteric-coated potassium chloride, with development of

small intestinal ulcerations, resulting in obstruction, hemorrhage or perforation.

An investigation was undertaken, and in January 1965 a final review and report was given as to the laboratory experiments on dogs and monkeys[3]. In reviewing hospital records of 395 cases that were found to have small bowel ulcerations on exploratory laparotomies, 50% had received diuretics with enteric-coated potassium chloride. The results of animal experiments indicated that the thiazide in itself had not been a causative agent, but the enteric-coated potassium chloride caused the intestinal lesions similar to those found in human beings.

Schwartz, et al[4], have shown the development of identical lesions in dogs following ligation of terminal mesenteric vessels to the gut and also by injection of microspheres into the terminal arterioles of the mesentery. Gazes, et al[5], have reported hemorrhage, ulceration and necrosis of the ileum in patients receiving digitalis. Since 50% of the hospital cases reported were above the age 50 and being treated for cardiovascular conditions, Gazes felt that this must also be considered an etiological factor.

CLINICAL FEATURES

Age group mainly was found to be above the age 50, with history of cardiac decompensation and heart therapy including digitalis and diuretics with or without enteric-coated potassium chloride. The onset of acute abdominal symptoms suggest a small intestinal obstruction or bowel perforation or hemorrhage. In those cases with intestinal obstruction, the symptoms were nausea and vomiting, borborygmi and peristaltic rushes. In those patients presenting hemorrhagic manifestations and or perforations, the abdomen was rigid, bowel sounds were absent, weakness, pallor and secondary anemia were noted.

ROENTGENOGRAPHIC FEATURES

The majority of films revealed small intestinal distention with fluid levels in those presenting with obstructive symptoms. In free perforation, air was occasionally noted under the leaves of the diaphragm, mainly on the right side. Patients presenting with an obstructive mechanism, the use of oral gastrografin or hypaque studies will reveal an annular constricting lesion in ⅓ of the cases. The presence of ulcerations is very difficult to demonstrate by x-ray.

PATHOLOGY

A single ulceration is usually noted. Occasionally two or more have been found proximal to an obstructed area. In those cases with obstruction, there is a definite narrowing of the lumen by a circumferential stricture. The intestinal wall is thickened and indurated, with evidence of acute and chronic inflammatory and sub-clinical fibrosis, and non-specific granulation reaction. The accompanying lymph nodes may reveal a non-specific lymphadenitis and hyperplasia.

PATHOPHYSIOLOGY

In theorizing the etiology, as noted in the pathological specimens, of this phenomenon, Kradgian[5], in reporting six cases of perforation or stenosis of the small intestines all lesions were noted in the ileum, and impairment of local blood supply to the segment were noted without actual vascular occlusion. It is therefore postulated, that the vascular component of a segment of a small bowel involved, reacts to either the concentration of the drug, or reflected in a trigger mechanism of splanchnic constriction, causing a partial devitalization of that segment of the bowel, which progresses to the pathological picture as noted in the previously reported cases. The vascular injury causes ischemia of a short segment of bowel followed by mucosal ulceration and partial devitalization of the muscularis with a resulting stenosis. A more extensive vascular injury results in a mucosal hemorrhage and or perforation. Potassium is noted to be an irritant to intestinal mucosa. It is therefore possible that muscle spasm may follow the sudden concentrated release of potassium chloride iniating the vascular spasm with resultant pathology.

TREATMENT

Following the necessary operative replacement of fluids, antibiotic therapy, and intestinal decompression, resection of the involved segment

of the small bowel with end to end anastomosis is indicated. Postoperative care is routine as for any small bowel resection.

The case presentations Numbers 1, 2 and 3, are the personal experience of the author, having treated these patients at the VA Hospital, Phoenix, Arizona, at the time of his association with that institution.

Case 1: (A.C.-VAH) This 41-year-old white male was admitted on 8/27/63 to the Medical Service, with chief complaint of acute onset of epigastric pain, constant and with increasing severity. The pain radiating posteriorly in the region between the scapula, and associated with nausea and vomiting. Past history: An exploratory laparotomy for abdominal symptomatology in 1961 at another institution, revealed evidence of cirrhosis of the liver secondary to hepatitis. Following his surgery in 1961, because of recurrent ascites, secondary to his cirrhosis, he was placed on enteric-coated potassium chloride therapy. Physical examination at the time of admission to the Medical Service revealed a well developed, thin white male, acutely ill. Height 6'. Weight 135 lbs. Temperature 98°, pulse of 60 and respirations of 20. Ear, nose and throat, head and neck were essentially normal; lungs were clear to percussion and auscultation; heart rate and rhythm were normal; blood pressure was 110/70. The abdomen was reported as scaphoid, with the liver palpated three fingers below the right costal margin, diffuse abdominal tenderness with rebound, bowel sounds were normal and no masses were palpable.

The initial impression on the Medical Service was that of acute pancreatitis or duodenal ulcer secondary to his cirrhosis. Laboratory workup: Hemoglobin and hematocrit, WBC and differential were within normal limits; urine showed two plus albumin. Gastric analysis 12-hour secretion revealed 5 milliequivalents of free Hcl., B.S.P. revealed 25% retention in 45 minutes, remaining liver profile and electrolyte studies were within normal limits. ECG revealed only a non-specific flattening of his T waves. X-rays of his chest showed slight elevation of the diaphragms. On 8/29/63 an upper GI series revealed a distended stomach with fluid, otherwise no evidence of ulcerations or obstructions. Patient was treated with intravenous fluids and nasal gastric suction for 24 hours. His symptoms improved except for mid-abdominal discomfort of mild degree. However, a repeat of the abdominal x-rays two dates later after treatment began revealed markedly distended small intestine with fluid levels, which was interpreted as a questionable gall-stone ileus, as the gall bladder now revealed evidence of multiple stones. Surgical consultation was then requested and immediate exploration advised. At exploration, as the peritoneum was entered, a segment of distal ileum appeared to be markedly dusky and distended and perforated before the operator's eyes. A segment approximately 18" proximal to the ileocecal valve and extending cephalad approximately another 24" was markedly dilated, congested and hemorrhagic. The corresponding mesentery appeared to be thickened and indurated. A segmental small bowel resection was done with an end to end anastomosis. The patient's postoperative course was uneventful.

Pathologist reported focal areas of mucosal and sub-mucosal congestion of recent hemorrhage, along with areas of mucosal and submucosal erosion covered by fibrinoid exudate loaded with leukocytes. The acute inflammatory changes have penerated the wall in these latter areas. The borders of the perforation consist predominantly of blood and fibrin. The diagnosis was acute hemorrhagic perforating enteritis. This patient was again seen in November 1964 with right upper quadrant pain and had a cholecystectomy for chronic cholecystitis and cholelithiasis. His postoperative course was uneventful and his liver was unchanged and his recurring ascites was controlled with therapy, other than enteric-coated potassium chloride.

Case 2: (W.S.-VAH) White male of 47 admitted 2/11/65 to the Medical Service with chief complaint of low abdominal discomfort of two days duration without associated nausea and vomiting, bowel movements have been normal. Past history: Chronic myocarditis with previous congested heart failure and atrial fibrillation resulting in a cerebral embolization with residual left hemiparesis in 1958. The patient had been

previously admitted in September 1964 to the Medieal Service for cardiac decompensation. The patient has been on Digoxin, thiazide with enteric-coated potassium chloride and coumadin therapy. Physical examination revealed an obese white male in acute distress. Ear, nose and throat were essentially negative. Increase in the AP diameter of the thorax with fine rales in right lower lobe. Systolic murmur in the apex with precordial transmission of the murmur — blood pressure was 136/92. Abdomen protruberant, with diffuse tenderness and positive rebound, bowel sounds were depressed and the remaining physical examination was essentially negative.



FIG. 1 — 12 cm. resected small bowel, with perforation 1.5 cm. in greatest diameter, anti-mesenteric border.

SGOT, Protein A/G ratio, serum amylase, BUN, Prothrombin time, were all within normal limits, WBC 11,700 with slight shift to the left, hemoglobin 15.5 gms., hematocrit 50%. Urinalysis was negative. Abdominal x-rays revealed air under right diaphragm. Exploratory laparotomy revealed a perforation on the antimesenteric border of the mid-ileum. The edges of the perforation were gangrenous. A segmental resection with end to end anastomosis was completed. The postoperative course was fairly stable until the 10th day postop, when an incisional separation developed which was repaired surgically. His postoperative course thereafter was uneventful and the patient was discharged on 3/19/65 from the Medical Service to which he had been transferred following his surgical recovery.

Pathological report: Gross (figure 1): 12 cm. resected small bowel covered with whitish fibrinous exudate with a perforation 1.5 cm. in its greatest diameter, with a zone of blackish discoloration. The mucosa revealed hemorrhagic discoloration. Microscopic report: Sections at the margin of the ulcer revealed granulation tissue with focal hemorrhage, covered with deposits of fibrin loaded with neutrophils, the ulceration extended through the complete thickness of the intestinal wall with adjacent acute inflammatory reaction. Diagnosis was a benign perforated small intestinal ulcer.

Case 3: (K.O.-VAH) White male of 54 admitted 2/16/65 complaining of abdominal discomfort in the mid-epigastric area, and also diffuse cramping type of pains in the lower abdomen. No associated nausea or vomiting, bowel movements have been normal. The patient was treated in August 1964 by his local medical doctor and was receiving thiazine with enteric-coated KCl and anhydrine with enteric-coated KCl. On 11/25/64 he had an appendectomy for abdominal complaints. The microscopic slides of sections of the appendix were reviewed by our pathologist who reported fibrosed appendix. The patient eviscerated following his appendectomy which was repaired on 12/15/64 and then discharged. Physical examination revealed a well nourished, white male in acute distress. Height 5'6", weight 160, temperature 98.6°, pulse of 90, BP 130/80. Ear, nose and throat, head and neck were essentially normal; lungs were clear to auscultation and percussion; heart rate rhythm normal, no murmurs. His abdomen was protuberant, tympanitic to percussion. His recent right para-rectus scar was noted with presence of a stitch abscess, bowel sounds were hyperactive with tingling and peristaltic rushes. Remaining physical examination was essentially negative. The impression on admission was a small bowel obstruction, mechanical, due to his recent surgery. Laboratory workup on admission including CBC, BUN, fasting blood sugar, protein A/G ratio, prothrombin time, were all within normal limits. Immediate x-ray of the abdomen revealed small bowel distention with fluid levels in mid-abdomen and no gas in the colon. X-ray of the chest was negative. The patient had a Cantor tube inserted; IV fluids instituted, a hypaque GI x-ray study revealed

slow progress, with a persistent distention of the small bowel. He was therefore explored on 2/18/65 at which time markedly distented proximal ileum and jejunum was noted with an area of marked narrowing of the ileum and collapsed small bowel distal to the point of constriction. The point of obstruction revealed no evidence of adhesive bands or mechanical type of obstruction. The base of the small bowel mesentery appeared to be cobblestone in appearance, the serosa in the area of the obstruction was dull, dusky in appearance with exudate on its surface. A small bowel resection and end to end anastomosis was completed.

Pathological report: Gross (figure 2) 10 cm. segment of small bowel, within 2 cm. of the proximal end a constricted area measuring 1.5 cm. in inside circumference with circumferential ulceration 3 mm. in diameter. The floor was covered with a greenish-greyish exudate, the mucosal margin of the ulcer appears congested. Microscopic: Mucosal ulceration, the floor consisting of granulation tissue infiltrated by granulocytes and increase of small cell infiltration in the adrentia. No evidence of specific infection or malignancy. The pathological diagnosis: Focal ulceration with stricture of the small bowel.

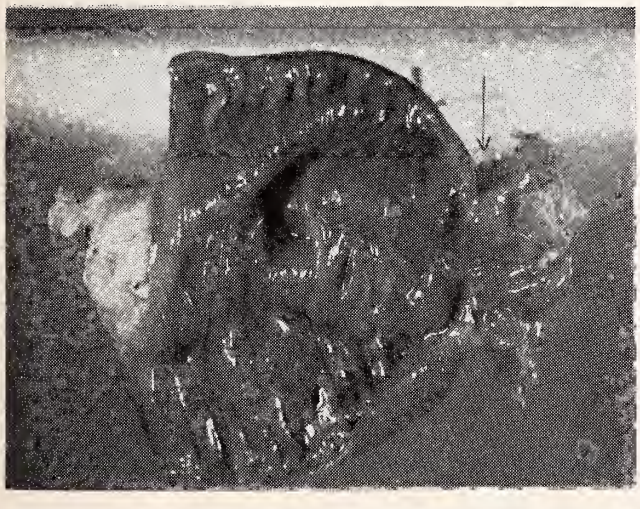


FIG. 2 — 10 cm. segment of small bowel with area of constriction 2 cm. from proximal end and showing 3 mm. circumferential ulceration.

In reviewing the hospital records of two of the larger hospitals in the area for similar cases, I found two cases of non-specific perforations of the small bowel that were entirely unrelated to enteric-coated ammonium chloride thiazide etiology. On contacting the physician in charge of both these cases, I learned that he had been treating them for arthritis and had introduced the therapy of a drug called INDOCIN. The manufacturer of Indocin reported GI disturbances in 21.4% of their clinical studies. These included diarrhea, 1.9%; peptic ulcerations including GI bleeding of 1.3%; and general GI disorders which included abdominal pain, nausea and vomiting of 18.2%. No reference was made to small bowel ulceration or perforation.

Case 4: (W.O.D.-GSH) White male, 43, who was treated for rheumatoid arthritis for three months prior to admission, with INDOCIN. Prior to that time the patient had been on steroids, at which time he developed gastric ulcers as revealed by x-ray. The steroids therefore had been discontinued and his ulcers had healed, by x-ray. On 6/29/65 he developed mid-abdominal pain with nausea and vomiting. Examination of ear, nose and throat, head and neck, was essentially normal. Chest was normal to auscultation and percussion, and heart sounds, rate and rhythm, were normal. Blood pressure 160/90. Abdomen revealed diffuse tenderness with rigidity and distention and depression of bowel sounds. The remaining physical examination was essentially negative. Laboratory workup revealed hemoglobin 12.1 gms., hematocrit 38%, WBC 8,700 with normal differential. Flat plate of abdomen revealed distended small bowel, no visible air under the diaphragm. IVP was reported as negative. Laparotomy performed the next day revealed a perforation on the antimesenterie border of the ileum approximately 36" proximal to the iliocecal valve. A segmental small bowel resection with end to end anastomosis was done. The patient's postoperative course was uneventful. PATHOLOGIC report: Gross description: A 7 cm. length of small bowel, perforation of antimesenteric border measuring 2x1½ cm., the edges of which were hemorrhagic and the lumen showing a yellowish grey exudate. MICROSCOPIC: Revealed necrosis of the submucosa, mucosa and serosa, the margin of the ulcer revealed marked infiltration with leukocytes with prominent eosinophilia. The adjacent tissue was edematous, infiltrated with small round cell infiltration, the serosa was covered with a fibropurulent exudate. Examination of the mesentery revealed no evidence of vascular occlusion. Diagnosis: An acute perforated ulcer of the small intestine, etiology undetermined.

Case 5: (R.T. St. JH) 27-year-old white male admitted to the hospital with chief complaint of passing bright red blood per rectum one month prior to admission, associated with bowel movements. This has recurred intermittently, no abdominal pain, nausea or vomiting. Past history reveals patient was treated for rheumatoid arthritis for the past seven years. He has had no previous steroid therapy. Approximately three months prior to onset of above illness he was put on Indocin therapy. Examination was essentially negative except for the presence of rheumatoid arthritis deformans. Abdominal examination revealed an ill-defined soft tissue mass and slight tenderness in right mid-abdomen. Laboratory workup was essentially negative. X-ray of colon revealed a suspicious lesion in the proximal cecum with a fistulous tract to the distal ileum. At operation, a mass in the region of the ileocecal junction was noted and the terminal ileum and proximal cecum was covered by adherent omentum. Multiple enlarged lymph nodes of the mesentery in this area were noted. Patient was treated with a right hemicolectomy and an end to end iliotransversostomy. His postoperative course was uneventful. PATHOLOGIC report; gross description: Distal ileum 13 cm., with the right colon. Just within the ileocecal valve an ulcerated area had penetrated through the entire thickness of the cecal wall which had connected with the adjacent adherent distal loop of ileum. Microscopic report: Lymphoid hyperplasia, sections of the cecum showed fibrosis and chronic inflammatory changes of the wall of the focal area of ulceration. Inflammatory changes extended through the thickness of the wall with evidence of acute and chronic inflammatory changes. The ulcer involving mucosa had communicated with the section of the ileum. Special stains showed no evidence of fungi or acid fast bacillus. The Pathologist felt that the histological changes were consistent with regional enteritis, mesenteric vascular structures revealed no evidence of occlusion.

Correspondence with the manufacturers of Indocin, have indicated that complications reported to them were perforation of diverticuli, lesions in ulcerative colitis, duodenal and gastric ulcer. Also, that regional enteritis has developed during the course of treatment with Indocin. However, small bowel perforations occurring with Indocin have not been reported. It is interesting to note that the histalogical changes in the specimen of case 5 were consistent with regional enteritis.

COMMENTS: Five cases of ulcers of the small bowel, in which none of the more common etiology causes can be implicated has been reported. Concern over the possibility of enteric-coated potassium chloride tablets or Indocin as the etiological agents have been noted. There is a strong suggestion that these lesions, which we have now begun to recognize, has increased in incidence over the past two years, are related to drug therapy. They are pathologically somewhat different from that noted in the surgical literature prior to 1963. Thus, not only has the incidence changed, but also the clinical spectrum of the pathological features have changed, comprising very strong evidence that we are dealing with some irritating agent producing these ulcers with obstruction, perforation or hemorrhage of the small bowel. That the difficulty of diagnosis are the facts that the prodromal symptoms are vague or non-existent. In each of the patients the presenting symptoms and physical findings were referrable to the complication of an ulcer, rather than the ulcer. Whether in the light of our current experience, we are now able to suspect the diagnosis in a patient with recurrent episodes of small bowel pathology, one must be cognizant of the drug therapy the patient has been on in the past.

Gross and microscopic findings in the cases presented are fairly consistent. No ectopic gastric mucosa was present. There was no other etiologic factor to explain the pathological findings in these patients. Ulcers, when present were solitary and not associated with inflammatory disease in the remaining small bowel and mesentery. Necrosis and resultant stricture of the intestine had produced obstructive symptoms. The disparity between the lesser degree of mucosal ulceration and the more marked submucosal fibrosis depends upon when the irritant is received and pathology started. The true pathogenesis of the primary ulcer of the small intestine still remains obscure. However, even though a vascular occlusion is not noted microscopically

in the mesenteric vessels, a condition of intermittent spasm could be the end result. In those cases of small bowel ulceration with or without perforation, when a thrombotic vessel in the mesentery is noted microscopically, the ulceration is noted on the mesenteric border. In the cases presented above, the ulcers were found on the antimesenteric border.

SUMMARY: Five patients with surgical conditions of the small bowel have been described with findings including stenosis, ulceration, perforation and bleeding. Microscopic studies have indicated these ulcerations are either secondary to vascular changes, which may be initiated by a drug, or by vascular spasm resulting in a picture as seen with minute thrombotic mesentery vascular occlusion. These ulcerations or perforations have predominantly been on the antimesenteric border, in contradistinction with those vascular occlusions of the small bowel which are primarily confined to the mesenteric border.

These lesions are not always easy to identify at exploration, particularly when prior surgery has caused adhesions. The lesions may be easily missed unless the bowel at the point of dilatation is carefully palpated for induration and the inability to dilate distally. A second stenotic lesion distal to the first may be easily missed unless one keeps in mind the occasional multiple lesions that may be present. The treatment of choice is segmental resection.

The cases of small intestine perforation associated with Indocin therapy is reported.

I wish to express my appreciation to Dr. C. Davee, Director of Veterans Administration Hospital, Phoenix, Arizona, for permission to present cases 1, 2 and 3, and to Dr. Dewitt Englund for permission to present cases 4 and 5.

REFERENCES

1. WATSON, M. R. Primary Non-Specific Ulceration of Small Bowel, Arch. Surg. Vol. 57, Oct. 1963.
2. BAKER, D. R., Schrader, W. H., Hitchcock, Small Bowel Ulceration Apparently Associated With Thiazide and Potassium Chloride Therapy. JAMA 190, Nov. 16, 1964.
3. LAWRASON, F. D. et al. Ulcerative Obstructive Lesions of the Small Intestines, JAMA 191, Feb. 22, 1965.
4. SCHWARTZ, S. et al. Roentgenologic Features of Vascular Disorders of Intestines, Radiol. Clin. N. Amer. 2: 71-87, April, 1964.
5. GAZES, P. C. Acute Hemorrhage and Necrosis of Intestines Associated with Digitalization Circulation. Vol. 23, March, 1961.
6. KRADGIAN, R. M. Ischemic Stenosis of Small Intestine. Arch. of Surg. Vol. 9, November, 1965.

Health insurance policies cover about 78 percent of the U. S. population. Benefits paid on these policies reached $8.6 billion in 1964. Government programs in 1964 paid about $1.2 billion in health aid to the vendors of health services.

The Community Pesticide Study in Arizona

Laurence S. Maynard, M.D.

James M. Witt, Ph. D.

Arizona has been selected as one of the twelve states in which a community study to discover evidence of pesticidal intoxication among the human population is to be undertaken. A special study unit for this purpose is housed at the University of Arizona. This study is financed by a research contract with the United States Public Health Service. It is being undertaken in close cooperation with the Arizona State Department of Health and several County Health Departments. It is expected that the completion of this study will require between five to ten years.

The cooperation of practicing physicians is solicited to uncover cases demonstrating clinical evidence of pesticidal poisoning. The study unit at the University of Arizona will undertake chemical analyses on biopsy specimens, if requested to do so by a physician.

THE production and use of the chlorinated hydrocarbon insecticides have increased enormously since the discovery of the insecticidal properties of DDT in the early 1940's. By 1962, annual use of insecticides alone had reached about 350 million pounds, and the amounts of herbicides, fungicides, etc., are at least as great. It is estimated that 5% of the land area of the United States is treated at least once each year with some form of pesticide.

The fundamental differences between the chlorinated hydrocarbons, and the older inorganic insecticides, such as lead arsenate, are that the insecticidal effectiveness of the chlorinated hydrocarbons persist for a longer time than the older insecticides and they are accumulated in the tissues of plants and animals more readily than the older compounds and as a result are transferred to various organisms in ecological food chains. The persistence in the environment of these substances raises the question of possible chronic toxicity from long continued ingestion of small quantities of these insecticides.

The public at large became aware of the possible dangers of the new pesticides largely through the publication in 1962 of Rachel Carson's book, *Silent Spring*[1], and considerable furor was aroused. This book can be criticized as being biased and unscientific in its approach, but it did raise a number of questions which deserved answers, and still do. Ecologically oriented writers have also discussed the possible effects of these substances on the biosphere in somewhat less emotional terms[2], but have likewise pointed out that we need to know more about the possible harmful consequences of the

University of Arizona, Department of Entomology
College of Agriculture, Tucson, Arizona.

widespread use of toxic substances which persist in the environment. In order to investigate possibilities, several governmental and congressional committees were formed and made recommendations for regulation of the use of pesticides, and research into the effects of these substances on human health[3, 4, 5, and 6]. As one of the results of these recommendations, the Community Pesticide Study was set up, under U. S. Public Health Service research contracts in 12 states. In Arizona the study is being carried out by the University of Arizona, at Tucson, in close cooperation with the State and County Health Departments. The study is expected to take five to ten years to complete.

The purpose of the study is to determine the impact of pesticides in the environment on people, and a combined epidemiological and biochemical approach will be used.

Data will be sought along four principal lines: use of pesticides in the community, exposure to pesticides by people, accumulation of pesticides by people, and finally, the effects on the health of people.

Contrary to what one might expect, figures on the total amounts of pesticide used in Arizona, or any other state, are not readily available. We are obtaining this data from the principal distributors of these materials, the agricultural applicators, some of the large-scale agricultural operators, and eventually we will employ a pesticide use questionnaire in certain selected intensive study areas, both agricultural and urban. By these means we should be able to answer the question, how much pesticide is used?

Exposure to pesticides comes from several sources. Most important to the populace as a whole are the residues found in foods. Other factors are occupational exposure in agricultural workers, pesticide formulators, aerial applicators. Dust-borne and water-borne drift from fields where pesticides have been applied, into adjacent areas, may also be an important factor. We are analyzing air and water samples to determine severity and extent of the drift problem, and foods available in the supermarkets will be sampled to determine the pesticide load in the average diet. The occupationally exposed groups will be followed closely, in the hope that we may be able to determine whether or not they have a higher incidence of neurological, psychiatric, liver pathology, or other disorders than the general population. The physicians of Arizona can be of great help to us in this part of the study, by being alert for unexplained symptoms in any patient who is occupationally exposed to pesticides, and by obtaining a pesticide exposure history in patients with liver disease, or neuropsychiatric disorders.

A distinction should be made here between the organic phosphate insecticides, and the chlorinated hydrocarbons. The organic phosphates have a much higher acute toxicity, and most acute poisoning cases are due to them. Depression of blood cholinesterase and the presence of p-nitrophenol in the urine confirm the diagnosis, and treatment is by atropine in large doses (2 mg. or more) until clinical signs of atropinization are noted. 2-PAM (Pyridine – 2-aldoxime methiodide) is also useful in therapy. However, the organic phosphates do not persist in the environment for very long, so they are essentially industrial hazards, like carbon tetrachloride in the cleaning industry, seldom affect those not occupationally exposed, and have little potential for causing chronic toxicity in the population at large. A note of caution is in order – these compounds have been used for suicidal and even for homicidal purposes, so the physician should be aware of this.

The chlorinated hydrocarbons are of lesser importance as a cause of acute poisoning, although cases have been reported. However, since they persist in the environment for long periods, and are stored in body fat, chronic toxicity is always a possibility. Studies in animals have shown that the primary site of action is the central nervous system, although liver damage has been observed as well[7]. We can offer laboratory assistance to any physician confronted with a case in which pesticide toxicity is a possibility; since these substances are stored in body fat, a biopsy of fatty tissue (one gram is sufficient) can be analyzed for pesticide content. We employ gas chromatography with the electron capture detector; these techniques can detect pesticides in quantities of less than one nanogram. Data is widely available on the "normal" levels of pesticide in body fat, and a correlation between blood and fat levels has been reported, but is not yet well substantiated. We hope to obtain further data on this point, so that eventually the more readily available blood sample may be substituted for the fat biopsy, but at this time we must ask for both fat and blood

samples. Any physician desiring pesticide analysis on one of his patients should phone the authors at the University of Arizona (Tucson), 884-1861, Extension 815; we will advise on the method of obtaining and storing the sample.

We are now obtaining data on the pesticide load in our population by assaying tissues obtained at autopsy for pesticide content. We are also interested in determining how much pesticide is present in the new-born infant, by placental transfer. Obtaining biopsies from new-borns is not very practical, so we have obtained the cooperation of some of the obstetricians in the Tucson area, and are collecting foreskins from male infant circumcisions, plus placenta from the same birth.

The final aspect of the problem — effects of pesticides on health — will be the most difficult to establish. We are setting up intensive study areas where we hope to follow the health and morbidity of the population as correlated with pesticide exposure over a prolonged period of time. A similar approach will be followed with some of the occupationally exposed groups, such as the pest control operators. We will be calling on the private physicians to obtain histories and physicals, from some of these subjects, with follow-up from time to time.

Summary: Public concern over contamination of the environment by pesticides has been increasing in recent years, but there is little data from which one may draw conclusions about the hazards, if any, produced by present levels. In an attempt to gain more information about this, the U. S. Public Health Service has sponsored studies in twelve states, of which Arizona is one. Data is being gathered on four principal aspects of the problem: the amount of pesticide used in the community, exposure of people to pesticides, absorption of pesticides by people, and the eonsequences of this to human health. Cooperation by the physicians of Arizona is sought, to bring to our attention possible cases of acute and chronic toxicity. We will offer to the physician the laboratory facilities for pesticide analysis in human biopsy material.

REFERENCES

1. Rachel Carson, Silent Spring, Houghton Mifflin Co., 1962.
2. Robert L. Rudd, Pesticides and the Living Landscape, U. of Wisconsin Press, Madison, Wisconsin, 1964.
3. Use of Pesticides, A Report of the President's Science Advisory Committee, May 15, 1963, U.S. Government Printing Office, Washington 25, D.C.
4. Pesticide Research and Controls, Hearing Before the Committee on Commerce, U.S. Senate (Magnuson Report), June 6, 1963, U.S. Government Printing Office, Washington 25, D.C.
5. Report of Second Citizens Advisory Committee on the Food and Drug Administration, October 1962, U.S. Department of Health, Education, and Welfare, Food and Drug Administration (re pesticides in part).
6. Hearing before a Subcommittee of the Committee on Appropriations, House of Representatives (Whitten Report), U.S. Department of Agriculture, Appropriations for 1966, U.S. Government Printing Office, 1965.
7. DDT, Vol. 2, Human and Veterinary Medicine, ed. by S. W. Simmons, Birhauser Verlag, Basel, 1959.

Without protection of the U. S. patent laws, it is doubtful if drug firms would have spent the money which produced cortisone, tolbutamide, isoniazid, chlorothiazide, broad spectrum antibiotics and many other wonder drugs of today.

A Study of the Experience of Utilization Committees

by

Elbert M. Marcom

At a time when the Utilization Committee is being hailed as the means of preventing bed shortages under Medicare, Mr. Elbert M. Marcom questions whether experience has not rather produced convincing evidence to the contrary. The study used as the basis for this report indicates that the available number of beds plays a more significant role in utilization than has heretofore been recognized.

Editor's Note: One factor not considered by Mr. Marcom in his review is that of type of case. This may prove to be insignificant, but is nonetheless pertinent. The point is that the additional beds may have been occupied by patients whose elective procedures had been perforce postponed.

Proliferation of medical staff utilization committees in recent years has been both rapid and widespread. As law now requires such committees in institutions which will serve medicare patients, their multiplication is likely to become even more rapid. Yet little has been reported about effects of the committees on utilization experience of hospitals in which they have been active. This paper discusses such effects.

The specific purpose of the present study is to determine whether hospital utilization committees in a particular group of hospitals have been sufficiently effective to produce significant changes from utilization experience of the same hospitals before committees were instituted. In a broader sense, and stated more succinctly, the problem posed is this: Are utilization committees effective?

Mr. Marcom received his M.H.A. Degree at Duke University in 1965. This article is abstracted from his Master's Report at Duke. He is currently employed in the Licensure and Certification Section of the Arizona State Department of Health as Medical Facilities Field Representative Supervisor.

To evaluate impartially the results of utilization committees, one must first consider just what they have been expected to do. As its name implies, the utilization review committee is a medical staff committee which takes as its primary function a combined, continuing medical and administrative review of the manner in which hospital facilities are utilized by physicians admitting patients to them. Under purview of this committee falls an examination, for various selected cases, of such matters as original necessity for admission to the hospital, need for and effectiveness of the treatment received there, and appropriateness of the length of stay in the hospital.

Robert M. Sigmond lists two desirable effects of utilization committee activity on overall utilization experience.[1] One is reduction of the inpatient rate of utilization to the lowest level consistent with high quality care. This could be achieved through provision of more outpatient

treatment and elimination of unnecessary admissions. The second goal would be increasing the inpatient rate of utilization in relation to beds. This increase in occupancy rate would constitute more efficient use of facilities and might forestall construction of additional facilities.

Thus a basic assumption underlying utilization committee activity is that more discreet and proper utilization of hospital facilities may result in a higher percentage of occupancy for present facilities, a consequent declining rate of building new beds, a lower admission rate in relation to population, and possibly a shorter average length of stay. Each of these eventualities could, upon realization, have very favorable financial impact toward provision of health care for the community.

This study is a gross one in the sense of examining figures for a group of hospitals rather than focusing on any particular hospital. The specific group studied comprises all non-federal, short term general and other special hospitals situated in the four county Tenth Councilor District of the Pennsylvania Medical Society. These counties — Alleghany, Beaver, Lawrence, and Westmoreland — compose a major segment of the Pittsburgh metropolitan area.

This geographic area, hereinafter called simply "Pittsburgh," possesses two primary characteristics which make it particularly suitable for study. First, the medical society in the Tenth Councilor District, in conjunction with the local hospital association and other health agencies, has sponsored a continuing program for studying utilization, one facet of which has been establishment of functioning utilization committees in hospitals of the district. Thus this area provides a group of hospitals well saturated with utilization committees. Secondly, the program, including the utilization committee facet, has been in action since 1959; hence any effect of utilization committees should have had ample time to become evident. Because of the sustained and concentrated focus on utilization practice in the Pittsburgh region, hospitals there, probably more than any other area in the country, should reflect any changes in utilization attributable to utilization programs and, more specifically, utilization committees.

The primary approach of the study is to combine standard data of population, number of beds, number of admissions, and number of patient days into several ratios or indicators such as occupancy rate, average length of stay, admissions per thousand persons, patient days per thousand persons, and available beds per thousand persons. These indicators are computed at three different intervals: 1953, five years before the beginning of utilization committee emphasis; 1958, for an idea of conditions as emphasis began; and 1963, ending a five-year period during which committees were very active. These dates of data collection allow comparison of indicator changes and rates of change between a five-year period in which utilization committees were not active and a five-year period characterized by vigorous committee activity.[2]

To heighten over-all trends, and to obviate partially distortion resulting from natural growth of the control group hospitals, the same indicators are computed also for the groups of all Pennsylvania hospitals and all United States hospitals. These groups are also limited to non-federal, short term general and other special hospitals.

For the 1958 through 1963 study period, during which utilization committees were active, it was found that occupancy rate (Table I.) for the Pittsburgh study group increased at a markedly increased rate compared to that of the previous five-year period. Also during the second interval, average length of stay (Table II.) decreased at an increased rate over that for the first period. For both of these indicators, relative increases in rate of change for the second period as compared to those of the first period were strikingly greater for the Pittsburgh group than for either all Pennsylvania hospitals or all United States hospitals.

Significance of changes in these two factors may be more easily weighed by converting the changes into a common denominator in the form of bed days, as shown in Table VI. Total bed days gained from these two changes represent about six percent of the total patient days actually used in Pittsburgh in 1958. If the admissions per thousand, patient days per thousand, and beds per thousand ratios had remained at their 1958 level, these additional bed days would have provided sufficient increased capacity in the 1958 number of beds to have served more than three and a half times the actual Pittsburgh population increase from 1958 through 1963, if

these persons had used hospitals at the 1958 admission rate.

TABLE I.
AVERAGE PERCENTAGE OF OCCUPANCY

	1953	1958	1963	1953-1958 Rate and Direction of Change	1958-1963 Rate and Direction of Change
Pittsburgh	79.2	79.8	81.3	+0.76%	+1.88%
Pennsylvania	75.1	77.1	78.0	+2.66%	+1.17%
United States	72.1	74.0	76.0	+2.66%	+1.17%

TABLE II.
AVERAGE LENGTH OF STAY IN DAYS

	1953	1958	1963	1953-1958 Rate and Direction of Change	1958-1963 Rate and Direction of Change
Pittsburgh	10.1	9.8	9.38	−2.73%	−4.30%
Pennsylvania	9.44	9.1	9.16	−3.60%	+0.66%
United States	7.9	7.6	7.67	−3.80%	+0.92%

Viewed another way, the additional capacity in the 1958 beds would have provided hospitalization at the 1958 rate of utilization for the actual population increase, plus making possible an additional six admissions per thousand persons for the entire 1963 population. This increase in admission rate compares with actual increases of eight and nine per thousand, respectively, for Pennsylvania and the United States from 1958 through 1963. To have kept pace with the other groups, Pittsburgh would have had to build less than one hundred and fifty beds, or about one-sixth, of the eight hundred and eighty actually built during the period.

Admissions per thousand and patient days per thousand indices (Tables III. and IV.) for Pittsburgh both increased at increased rates during the 1958 through 1963 period; hence the quantity of hospitalization experienced was not successfully curbed. The beds per thousand ratio (Table V.) also increased at an increased rate during the second period, challenging the idea that increased occupancy rates will slow the accretion rate for new beds.

That overall utilization experience in the Pittsburgh area deviated markedly from that of the state and the nation during the critical second five-year interval cannot be denied. In 1958 the Pittsburgh admission rate was equal to that for the other two groups; its occupancy rate and bed ratio were both much higher than those of the other groups. By 1963 this area had added almost ten per cent additional beds while experiencing a population increase of only about one and a half per cent; hence Pittsburgh in 1963 had no dearth of beds in relation to population. Yet for the second period this area exhibited an increased occupancy rate and a decreased length of stay, both of which factors changed at accelerated rates over those of the previous five-year period. For these indicator changes, and particularly for the accelerated rates of change, there is no apparent reason other than the expressed desire and effort of utilization committees to utilize hospital facilities to their greatest efficiency.

TABLE III.
ADMISSIONS PER THOUSAND PERSONS

	1953	1958	1963	1953-1958 Rate and Direction of Change	1958-1963 Rate and Direction of Change
Pittsburgh	117	125	143	+6.83%	+14.4%
Pennsylvania	114	125	133	+9.65%	+ 6.4%
United States	114	125	134	+9.65%	+ 7.2%

TABLE IV.
PATIENT DAYS PER THOUSAND PERSONS

	1953	1958	1963	1953-1958 Rate and Direction of Change	1958-1963 Rate and Direction of Change
Pittsburgh	1,179	1,225	1,345	+3.90%	+9.60%
Pennsylvania	1,080	1,141	1,216	+5.65%	+6.56%
United States	904	946	1,027	+4.65%	+7.86%

Occupancy and length of stay are not, however, the only relevant variables in determining the extent of utilization, as is plainly evidenced in the Pittsburgh situation. The relative number of beds available is also an important consideration. Concurrent with increased occupancy and decreased length of stay, Pittsburgh added, in the 1958 through 1963 interval, almost ten per cent more beds. Over the same period the admissions per thousand index increased a phenomenal 14.4 percent, an increase far outstripping that for the previous five years.

Yet one avowed purpose of utilization committees is the reduction in number of unnecessary admissions. Another purpose of these committees involves the more efficient use, including higher occupancy, of current hospital facilities as an alternative to building additional beds. Despite these stated functions of utilization committees, Pittsburgh experienced, during a five-year period in which such committees were active, increases in admission rate and bed ratio at an accelerated rate of increase over the previous five-year period in which utilization committees were not active.

Judged purely from the standpoint of relative indicator changes, one could only judge that utilization committees have not in this case had any effect whatever in reducing unnecessary admissions or in slowing bed accretion. It seems

inconceivable to think that the populace of Pittsburgh would have become sufficiently less healthy between 1958 and 1963 to necessitate an increase in admission rate equivalent to twice that of the United States for the same period.

TABLE V.
BEDS PER THOUSAND PERSONS

	1953	1958	1963	1953-1958 Rate and Direction of Change	1958-1963 Rate and Direction of Change
Pittsburgh	4.08	4.20	4.53	+2.94%	+7.86%
Pennsylvania	3.94	4.05	4.26	+2.80%	+5.09%
United States	3.43	3.50	3.70	+2.04%	+5.72%

TABLE VI.
SIGNIFICANCE OF INCREASED OCCUPANCY RATE AND DECREASED LENGTH OF STAY FOR PITTSBURGH FROM 1958 THROUGH 1963

A. Additional capacity due to:

		Bed Days
1. Decrease in average length of stay 0.42 patient day decrease x 278,433 admissions	=	117,000
2. Increase in occupancy rate 9,375 beds x 365 days per year x 0.015 occupancy rate increase	=	51,300
Total increased capacity	=	168,300

B. Conversion of increased capacity to equivalent 1963 admissions

$$\frac{\text{168,300 bed days increase in cap.}}{\text{9.38 patient days 1963 avg. stay}} = \text{17,900 equivalent 1963 admissions}$$

C. Relation of increase in admissions to population

$$\frac{\text{17,900 increase in possible adm.}}{\text{32.6 thousand increase in pop.}} = \text{550 possible adms. per 100 for new pop.}$$

32.6 thos. increase in population X 125 admissions per 1000 for Pittsburgh in 1958 = 4,075 additional adms. to provide new pop. with 1958 level of utilization

17,900 additional possible admissions
− 4,075 admissions required to bring new population to 1958 rate of utilization

13,825 remaining admissions to be spread over entire 1963 population

$$\frac{\text{13,825 remaining possible admissions}}{\text{2,262,000 total 1963 Pittsburgh area pop.}} = \text{6.1 additional possible adm. per 1,000}$$

Though of course any definition of "necessary" hospitalization is debatable, one could only surmise from the phenomenal increase in admission rate that incidence of unnecessary admissions has not decreased but has quite probably increased.

No evidence has been found in this study to indicate that an increased occupancy rate has been in any way a deterrent to addition of new beds. The Pittsburgh bed ratio increased at an increased rate during the 1958 through 1963 period concurrent with a substantial increase in occupancy rate, which was expected to provide additional capacity and thus diminish the accretion rate for new beds.

At this point it is perhaps constructive to propose a fundamental distinction between "effectiveness" and "quantity" as being separable facets of utilization control. "Effectiveness" refers to the relative degree to which hospitals are being used efficiently; it may be measured in terms of the increase in hospital capacity made possible through an increased occupancy rate and decreased average length of stay. "Quantity" alludes quite simply to the relative quantity of hospitalization used, as measured primarily in admissions per thousand and secondarily in patient days per thousand.

In terms of these divisions of effectiveness and quantity, Pittsburgh area utilization experience can be conveniently categorized. It would appear that utilization committees there have been quite successful in significantly improving the effectiveness of hospital care. In changing or controlling the quantity of hospitalization used, however, these same committees apparently have had no influence whatever.

To assert that utilization comittees have not been effective, at least in the Pittsburgh area, in controlling the quantity of hospitalization is not to imply that these committees have no value at all. In order to use the utilization committee concept wisely, one must know what such committees can feasibly accomplish and, equally important, what they should not be expected to do.

The findings of this study indicate that medical staff utilization committees may be reasonably expected, if wisely administered, to contribute significantly to increased effectiveness in utilization of hospitals, as measured in higher occupancy rate and shorter length of stay. No evidence indicates, however, that utilization committees have any influence or control in changing the quantity of hospitalization used as measured in admissions per thousand persons and patient days per thousand persons; they should not be proliferated on the assumption that they will accomplish this goal.

Inasmuch as the increase in quantity of hospitalization for Pittsburgh for the second period corresponds somewhat closely with the increased capacity in new beds, it is suggested that quantity of hospitalization used is perhaps influenced more by the number of beds available than by utilization committees. A study by Richard L. Durbin and Gordon Antelman supports this opinion; they found that admission rates increase very rapidly as the relative number of beds increases.[3] Given this relationship, one would hard-

ly expect that any utilization committee, other than one with absolute police power, could withstand public demand and effectively control quantity of hospitalization unless the number of beds available might also be effectively limited.

Ray E. Brown has proposed that hospitals be franchised by some state agency, thus limiting the number of beds available.[4] Establishing a controlled optimum number of beds for a particular population would set a practical upper limit to the quantity of hospitalization available to that population. In this situation, the utilization committee would have a feasible task of maintaining effectiveness of utilization so that the community could receive an adequate quantity of hospitalization from its hospitals.

One must not forget that utilization committees are established as the primary control on quantity of utilization under medicare. Judged from experience of utilization committees in the Pittsburgh area, this will be a formidable, if not impossible, task without some limit on the number of hospital beds. Let us hope that some feasible means of controlling utilization will be achieved in the early months of the program.

In summary, let it be restated that utilization committees promise significant improvements in the effectiveness of hospital utilization as evidenced in increased occupancy rates and decreased average length of stay. To present them, however, as a splendid panacea for all problems of effectiveness and quantity of hospital utilization, in the absence of any control of the number of beds available, is to perpetuate a cruel hoax both on hospitals and the general public.

SOURCE NOTES FOR TABLES

Ratios in the tables were computed from raw data of population, number of beds, number of admissions, and average daily census. Sources for the original figures are listed below.

Population

1. Pittsburgh area population figures for 1953 and 1958 are cited by county from the 1960 **Pennsylvania Statistical Abstract,** third edition, p. 4. This work is published by the Bureau of Statistics of the Department of Internal Affairs of the Commonwealth of Pennsylvania.
2. For all Pittsburgh area counties except Lawrence, 1963 population figures came from **Population Estimates,** Series P-25, No. 291 (September 28, 1964), p. 5. The Bureau of the Census of the U. S. Department of Commerce publishes this bulletin. As a 1963 estimate was not available for Lawrence County, a 1962 estimate taken from the 1963 **Pennsylvania Statistical Abstract,** sixth edition, p. 7, was rounded upward to the nearest thousand.
3. Pennsylvania population estimates for 1953 and 1958 come from **Population Estimates,** Series p-25, No. 229 (May 22, 1961), pp. 4-5. The 1963 figure is from Series P-25, No. 289 (August 31, 1964), p. 10.
4. All United States population figures are found in **Population Estimates,** Series P-25, No. 278 (January 29, 1964), p. 7.

Other Data

1. For Pennsylvania and the United States, all other figures came from the statistics sections of the respective 1954, 1959, and 1964 Guide Issues of **Hospitals.** An exception to this are the 1953 Pennsylvania figures, which are placed in the 1954 Guide Issue at the first of the listing of Pennsylvania hospitals.
2. Pittsburgh area data represent the collected totals for all individual non-federal short term hospitals located in the four county study area. These individual hospital figures, shown in Table VIII, were collected from listings of Pennsylvania hospitals in the 1954, 1959, and 1964 Guide Issues of **Hospitals.**

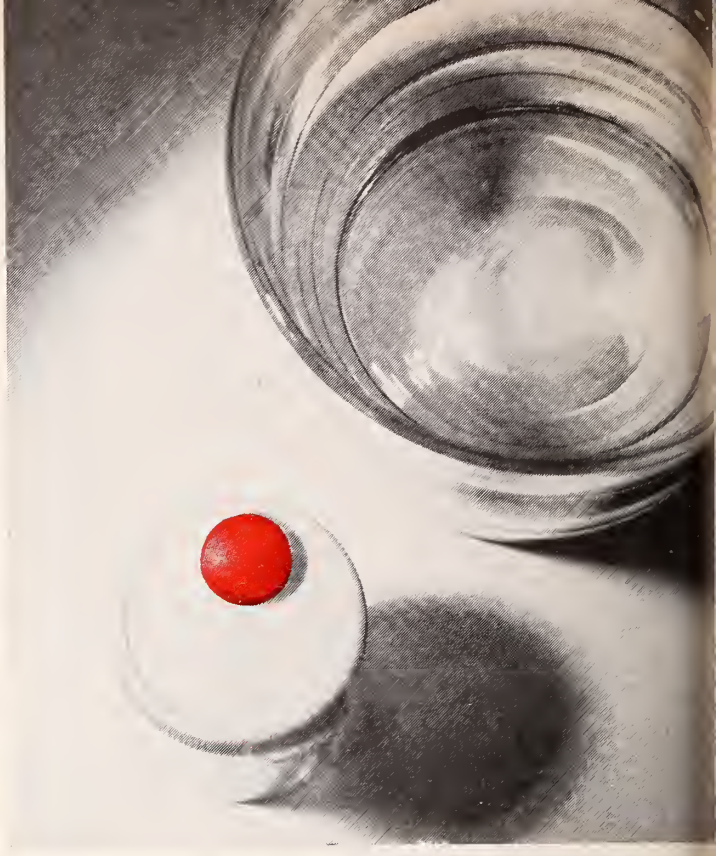
NOTES

1. Sigmond, Robert M. "Controlling Hospital Use through Medical-Staff Utilization Committees," **Where is Hospital Use Headed** (Chicago: University of Chicago, 1962), pp. 73-80.
2. Reports on utilization committee activity include:
 London, Morris, and John A. Nave, M.D. "Western Pennsylvania Pioneers with Special Utilization Project," **Hospital Topics,** XLII (August, 1964), 47-51.
 London, Morris. "Utilization Committees," **Medical Record News,** XXXIV (August, 1963), 149-152, 175ff.
 Sigmond, Robert M. "What Utilization Committees Taught Us," **The Modern Hospital,** C (February, 1963), 67-71.
3. Durbin, Richard L. and Gordon Antelman. "A Study of the Effects of Selected Variables on Hospital Utilization," **Hospital Management,** XCVIII (August, 1964), 57-60.
4. Brown, Ray E. "Let the Public Control Utilization through Planning," **Hospitals,** XXXIII (December, 1959), 34-39ff.



Elbert M. Marcom





one mid-morning **one mid-evening**

New 300 mg tablet It's made for b.i.d.

For Aduits–2 tablets provide a full 24 hours of therapy...with all the extra benefits of DECLOMYCIN...lower mg intake per day...proven potency... 1-2 days' "extra" activity to protect against relapse or secondary infection.

DECLOMYCIN®
DEMETHYLCHLORTETRACYCLINE
300 mg FILM COATED TABLETS

Effective in a wide range of everyday infections —respiratory, urinary tract and others—in the young and aged—the acutely or chronically ill—when the offending organisms are tetracycline-sensitive.

Contraindication—History of hypersensitivity to demethylchlortetracycline.

Warning — In renal impairment, usual doses may lead to excessive systemic accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of discomfort.

Precautions and Side Effects — Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. Use of demethylchlortetracycline during tooth development (last trimester of pregnancy, neonatal period and early childhood) may cause discoloration of the teeth (yellow-grey-brownish). This effect occurs mostly during long-term use but has also been observed in short treatment courses. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment. Side reactions include glossitis stomatitis, proctitis, nausea, diarrhea, vaginitis and dermatitis. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Anaphylactoid reactions have been reported.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products.

Capsules: 150 mg of demethylchlortetracycline HCl.

Tablets: film coated, 300 mg, 150 mg, and 75 mg of demethylchlortetracycline HCl.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York

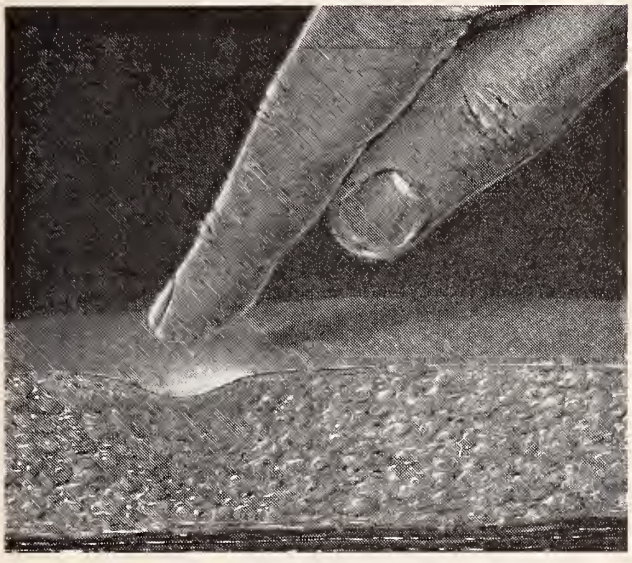
Lederle

674-6—3838

For prompt, emphatic diuresis

aquaTAG®

(BENZTHIAZIDE)



NEW FROM TUTAG for prompt, comfortable diuretic action with a balanced excretion of sodium chloride and a lower potassium loss under normal dosage and diet regimen

DIURETIC ACTION: Clinically, the oral administration of AQUATAG (benzthiazide) results in diuretic activity within two hours with maximal natriuretic, chloruretic, and diuretic effects occurring during the fourth, fifth and sixth hours. Maintenance of response continues for approximately 12 to 18 hours. Acidosis is an unlikely complication since therapeutic doses of AQUATAG (benzthiazide) do not appreciably increase bicarbonate excretion. Edematous patients receiving 50 mg. of AQUATAG (benzthiazide) daily for five days developed a maximal increase in the rate of sodium excretion on the first day, and maintained this high rate until depletion of excessive body stores of sodium.

In congestive heart-failure patients, AQUATAG (benzthiazide) produced the same weight loss, during a 48-hour treatment period as did a maximally effective dose of hydrochlorothiazide.

DOSAGE: Diuresis, initially 50 to 200 mg.; maintenance 25 to 150 mg., daily. Hypertension 50 to 100 mg. initially, adjusted to 50 mg. t.i.d. or downward to minimal effective dosage level.

PRECAUTIONS AND SIDE EFFECTS: Electrolyte imbalance with hypokalemia, hypochloremic alkalosis and hyponatremia may occur. Other reactions may include blood dyscrasias, hyperuricemia and gout, nausea, jaundice, anorexia, vomiting, diarrhea, dizziness, paresthesia, photosensitivity and headache. Insulin requirements may be altered in diabetes.

WARNINGS: Dosage of coadministered antihypertensive agents should be reduced by at least 50%. Use with caution in edema due to renal disease; advanced hepatic disease or suspected presence of electrolyte imbalance. Stenosis or ulcer of small intestine have been reported with coated potassium formulas and should be administered only when indicated. Until further clinical experience is obtained, the use of the drug in pregnant patients should be carefully weighed against possible hazards to the fetus.

CONTRAINDICATIONS: AQUATAG (benzthiazide) is contraindicated in progressive renal disease or disfunction including increasing oliguria and azotemia. Continued administration of this drug is contraindicated in patients who show no response to its diuretic or antihypertensive properties.

Before prescribing or administering, read the package insert or file card available on request.

Available as 25 or 50 mg. scored tablets.

Request clinical samples and literature on your letterhead.

S.J. TUTAG & COMPANY
Detroit, Michigan 48234



featuring

- Plastic Eyes and Contact Lenses
- Zenith Hearing Aids
- Distributor for Major Optical Manufacturers
- Complete line of Refractory Equipment
- Office Planning and Layout

GUILD OPTICIANS
A SIGN OF TRUST

14 E. Monroe St.
ALpine 8-8928
2021 N. Central Ave.
252-3242
4350 N. Central Ave.
AMherst 6-8824
1901 E. Thomas Rd.
279-9112

909 E. Brill.
252-8904
218 E. Stetson Dr. (Scottsdale)
WHitney 6-1711
250 E. Dunlap (Sunnyslope)
944-8821
Marcus J. Lawrence Clinic
Cottonwood, Arizona

PARK CENTRAL
2040 W. Bethany Home Rd.
274-3193
550 W. Thomas Rd.
CRestwood 4-5409
461 W. Catalina Dr.
CRestwood 9-3509

PM
PHOENIX McLEOD OPTICAL

HOME OFFICE: 625 E. Indian School Road . . . 264-5666

PRINCIPLES OF MEDICAL ETHICS

Preamble. — These principles are intended to aid physicians individually and collectively in maintaining a high level of ethical conduct. They are not laws but standards by which a physician may determine the propriety of his conduct in his relationship with patients, with colleagues, with members of allied professions, and with the public.

Section 1. — The principal objective of the medical profession is to render service to humanity with full respect for the dignity of man. Physicians should merit the confidence of patients entrusted to their care, rendering to each a full-measure of service and devotion.

Section 2. — Physicians should strive continually to improve medical knowledge and skill, and should make available to their patients and colleagues the benefits of their professional attainments.

Section 3. — A physician should practice a method of healing founded on a scientific basis; and he should not voluntarily associate professionally with anyone who violates this principle.

Section 4. — The medical profession should safeguard the public and itself against physicians deficient in moral character or professional competence. Physicians should observe all laws, uphold the dignity and honor of the profession and accept its self-imposed disciplines. They should expose, without hesitation, illegal or unethical conduct of fellow members of the profession.

Section 5. — A physician may choose whom he will serve. In an emergency, however, he should render service to the best of his ability. Having undertaken the care of a patient, he may not neglect him; and unless he has been discharged he may discontinue his services only after giving adequate notice. He should not solicit patients.

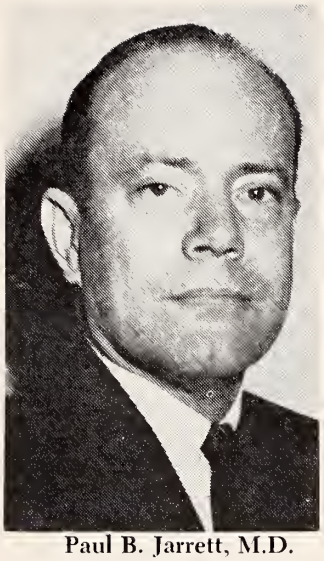
Section 6. — A physician should not dispose of his services under terms or conditions which tend to interfere with or impair the free and complete exercise of his medical judgment and skill or tend to cause a deterioration of the quality of medical care.

Section 7. — In the practice of medicine a physician should limit the source of his professional income to medical services actually rendered by him, or under his supervision, to his patients. His fee should be commensurate with the services rendered and the patient's ability to pay. He should neither pay nor receive a commission for referral of patients. Drugs, remedies or appliances may be dispensed or supplied by the physician provided it is in the best interests of the patient.

Section 8. — A physician should seek consultation upon request; in doubtful or difficult cases; or whenever it appears that the quality of medical service may be enhanced thereby.

Section 9. — A physician may not reveal the confidences entrusted to him in the course of medical attendance, or the deficiencies he may observe in the character of patients, unless he is required to do so by law or unless it becomes necessary in order to protect the welfare of the individual or of the community.

Section 10. — The honored ideals of the medical profession imply that the responsibilities of the physician extend not only to the individual, but also to society where these responsibilities deserve his interest and participation in activities which have the purpose of improving both the health and the well-being of the individual and the community.



Paul B. Jarrett, M.D.

Assignment vs. Direct Billing

Some physicians have declared that they will accept an assignment under Medicare when treating "dead-beats," transients and generally poor credit risks.

The thinking behind this is obvious, but the obvious portion may, like an iceberg, be a small portion of the total consideration.

The acceptance of an assignment means the acceptance of what the intermediary says is a "reasonable fee." The doctor is also assuming that the $50.00 deductible has been paid, and thereby he also assumes that his bill isn't the first of multiple bills for other physician services.

The cost of multiple billings hardly justifies more than one statement for small amounts, and the physician who collects the 20% from the patient first, may find that part of the 80% remaining may go to the patient as a refund for an overcharge.

The Orange County Medical Society Quarterly Bulletin in the March issue had this to say about direct billing to the patient:

"1. All patients soon realize that they are responsible for bills and that the government plan is only a co-insurance type program.

"2. If government allowances are not high enough, there will be more individual voters to bring pressure for an increase, rather than have this burden on a few physicians.

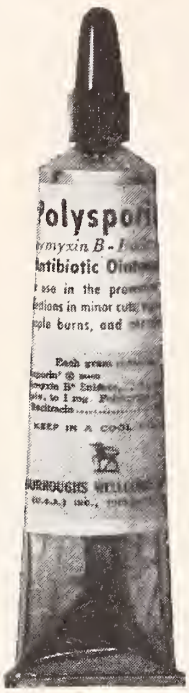
"3. It will allow the deductible and the 80% features and does not effect any individual attempts at collections.

"4. If there is any question that an individual physician is overcharging, then this would be mediated by local medical society mediation committees.

"5. It better retains the identity of the physician."

The decision to accept or not accept assignments under Medicare is, of course, an individual decision as the law permits both. Wisdom would dictate the examination of both sides of the coin before making this decision.

in treating topical infections, no need to sensitize the patient

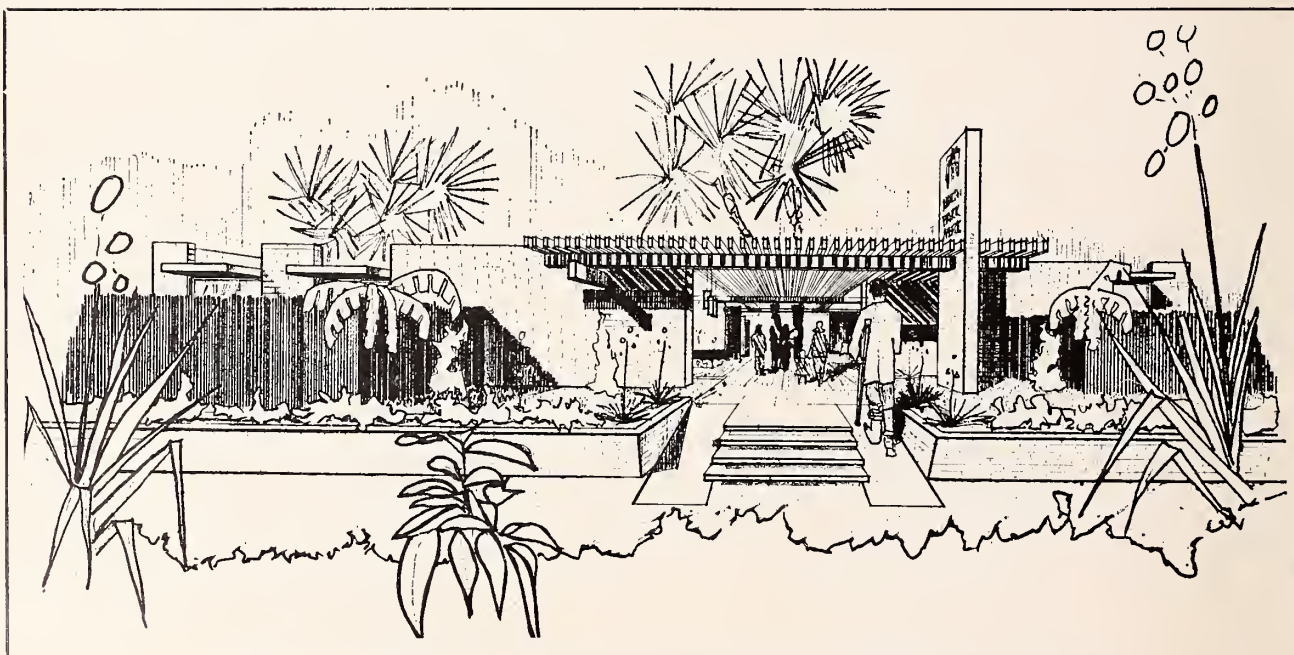


USE 'POLYSPORIN'® brand POLYMYXIN B-BACITRACIN ANTIBIOTIC OINTMENT

broad-spectrum antibiotic therapy with minimum risk of sensitization

Caution: As with other antibiotic products, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs. **Contraindication:** This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.
Supplied: In ½ oz. and 1 oz. tubes
Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

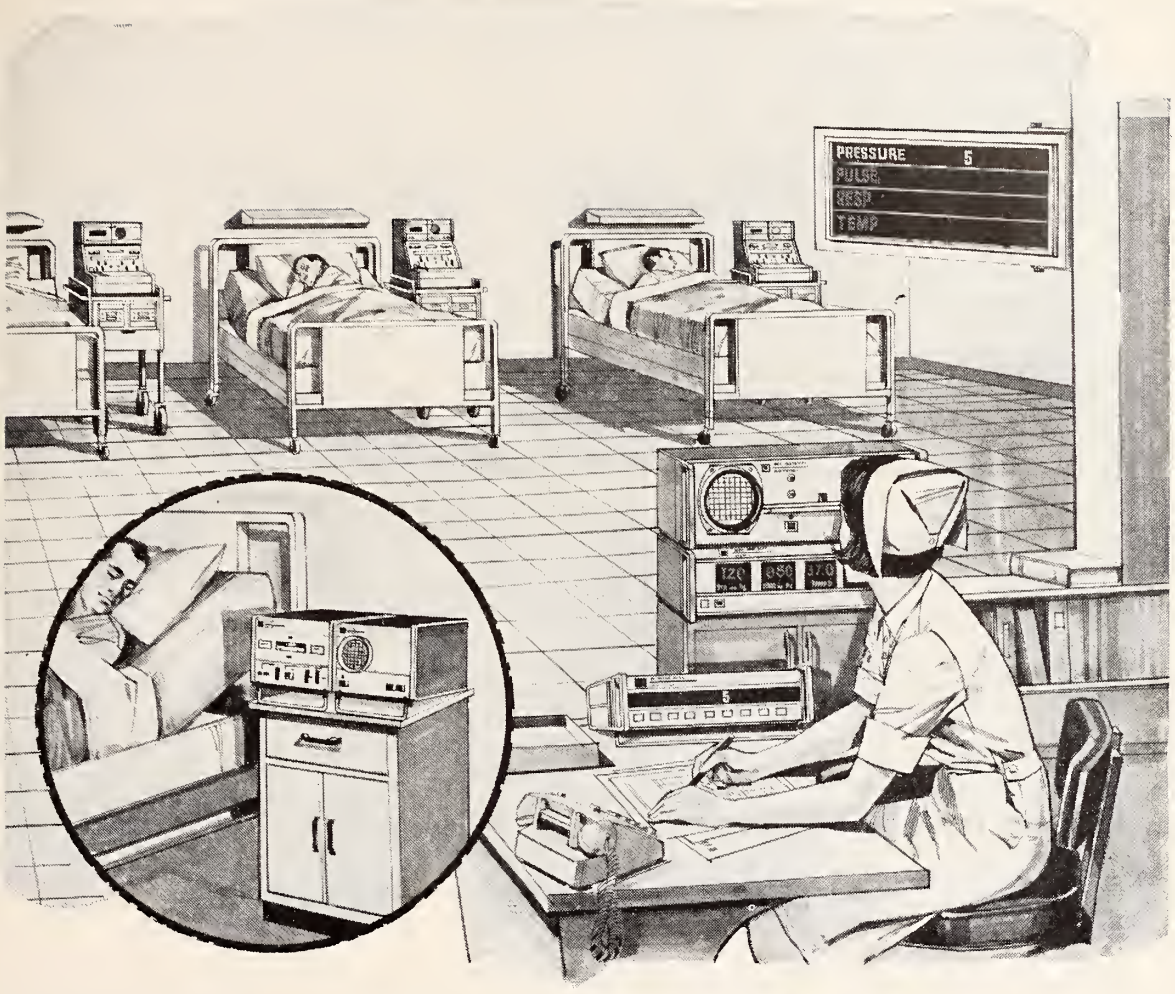


Deluxe Medical Suites Available December 1966

NORTH PARK MEDICAL CENTER

78 West Ray Road
Chandler, Arizona

SHULTS REALTY CO.
969-5509



START SMALL **AND GROW**

Sanborn's new Patient Monitoring Modules adapt perfectly to expanding intensive-care needs

Sanborn "Series 780" Patient Monitoring Systems alert the intensive-care staff *instantly* to the distress of any monitored patient, permitting more effective care of *all* patients by the available nurses.

Design of the systems in functional modules offers greatest flexibility in adapting any monitoring system to future needs — the hospital system can begin modestly and grow steadily, with original modules fully utilized in the expanding system. Also, monitoring capabilities can be quickly shifted from bed to bed, as needed. Separate modules for heart rate (with integral pacer if desired), for temperature and respiration rate, and for systolic and diastolic pressures. Other modules for synchronized defibrillation, for resuscitative cardiac pacing, for oscilloscope display of cardiac or pulse waveforms, and for automatic pacing and ECG recording with any cardiac distress. Series 780 also includes remote alarm indicators (specific-parameter or general alarms, by bed) and remote patient-select push-button switchboxes for through-switching of patient signals to numerical display, oscilloscope, and/or chart recorders at the central station.

A complete range of transducers, recorders, and data displays engineered by Sanborn allows us to design, install, and fully warrant the complete system required for unexcelled patient care in your hospital.

For details, phone your local Hewlett-Packard/ Sanborn office or write Sanborn Division, Waltham, Mass. 02154. In Europe, write Hewlett-Packard S.A., 54 Route des Acacias, Geneva, Switzerland.

HEWLETT PACKARD hp *SANBORN DIVISION*

HEWLETT-PACKARD, *Neely Sales Division*, 3009 N. Scottsdale Road, (602) 945-6142
Scottsdale, Arizona 85251



"A"



"B"

We Start to Build

On April 7, 1966, the contract for construction of the Basic Medical Sciences Building was signed. This was the culmination of a great deal of earlier effort, much of which has already been reviewed on this page. We are particularly grateful for the fine level of cooperation which was achieved between the representatives of the U.S. Public Health Service in Washington, our local architects and the Physical Plant Division of the University. This made it possible to complete all of the final working drawings for the building between last July, when we received our matching grant, and January, when the drawings were submitted to Washington for final approval. This permitted the opening of the contractors' bids by March 17 which led to the contract signing on April 7.

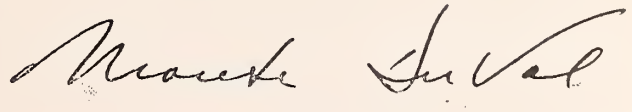
This issue of Arizona Medicine contains an aerial view of that portion of Tucson in which the medical school is to be located (photo "A"). The view is from the northeast, looking south and west. At the top right is Sentinel Peak (generally known as "A" Mountain), west of downtown Tucson. Near the middle of the picture is the University campus. Its palm-lined, central mall can be visualized running east and west through the middle of the campus; a portion of the athletic field is recognizable at left center and the northern-most extremity of the campus can be seen to end at Speedway Boulevard. Speedway is the major, east-west street which can be seen crossing the picture from the lower left center to top right center and can also be identified by its tangential position to the very large parking lot almost exactly in the middle of the photograph.

Two blocks north of Speedway (in the immediate foreground of the photograph) is the area known as "Polo Village." The Quonset huts which have housed married students for so many years make it readily identifiable. This area includes approximately 29 acres and is shaped somewhat like a right triangle, the right angle of which is just to the right of the bottom-center of the photograph and whose hypotenuse could be represented by a straight line parallel with the bottom of the photograph and one-third of the way up. The large buildings a little below the center of the photograph (which the "hypotenuse" crosses) are fraternity houses.

The second picture is an enlargement of that portion of the Polo Village area with which we are particularly concerned (photo "B"). A short stretch of Speedway (running east and west) would be in the extreme upper left-hand corner of this photograph. Since Speedway is the northern border of the main campus of the University, it is apparent from the photograph that there are two blocks which remain between the main campus and Polo Village. Similarly, a short stretch of Campbell Avenue (running north and south) would be in the lower left-hand corner. Campbell Avenue is one of the major north-south arteries in the middle of Tucson. It connects the foothills area with the Tucson International Airport.

As described in an earlier communication, we elected to construct the Basic Medical Science Building in the "waist" which lies east of the fraternity houses (where the five "flat-top" Quonsets are). Our building will face south toward the main campus. The Clinical Science wing and Teaching Hospital will be joined to this building on its north side. This will permit any subsequent clinical growth, patient traffic, automobiles, etc., to orient in a direction which is away from the main campus. When the entire complex is complete, the main entrance will be on its east side, one block west of Campbell Avenue. The service access for deliveries and haulage will be from the northwest side of the building in order to avoid crossing the campus south of the building.

At appropriate intervals later we will have additional photographs showing the progress of construction.



MUNICIPAL BONDS offer you important advantages

First, the income from Arizona Municipal Bonds is completely tax free and is not even included in an Income Tax return.

Also, Municipal Bonds are quality investments, a position they enjoy as a result of the outstanding record established by municipalities, extending over a long span of years, in promptly meeting their Debt Service Requirements.

Furthermore, where specific maturities are desired, this requirement is easily satisfied.

In addition, geographical diversification is available, an important ingredient of any well conceived investment program.

And finally, the broad interest in municipal bonds from individuals, banks and insurance companies provides an active and ready market.

The complete facilities of the Investment Department and its experienced personnel are available to you. We invite your inquiries.

Send for our Booklet: "TAX-FREE MUNICIPAL BONDS"

VALLEY NATIONAL BANK

INVESTMENT DEPARTMENT

Phoenix:	Tucson:
Home Office	Downtown Office
Phone: 261-2900	Phone: 624-8711

Specializing in Arizona Municipal Bonds

The discomforts of

DIARRHEA
MUCOUS COLITIS
DIVERTICULITIS
SPASTIC URETERITIS
BLADDER SPASM

are relieved by direct musculotropic action with.....

Trocinate®

BRAND THIPHENAMIL HCl

Available in 100 milligram pink sugar-coated tablets.

The high therapeutic index permits dosage sufficient to relieve spasm promptly. The usual initial dose is 4 tablets. Maintenance dosage is usually one or two tablets 4 times a day.

Trocinate *BRAND* THIPHENAMIL HCl
BETA-DIETHYLAMINOETHYL DIPHENYLTHIOACETATE HYDROCHLORIDE

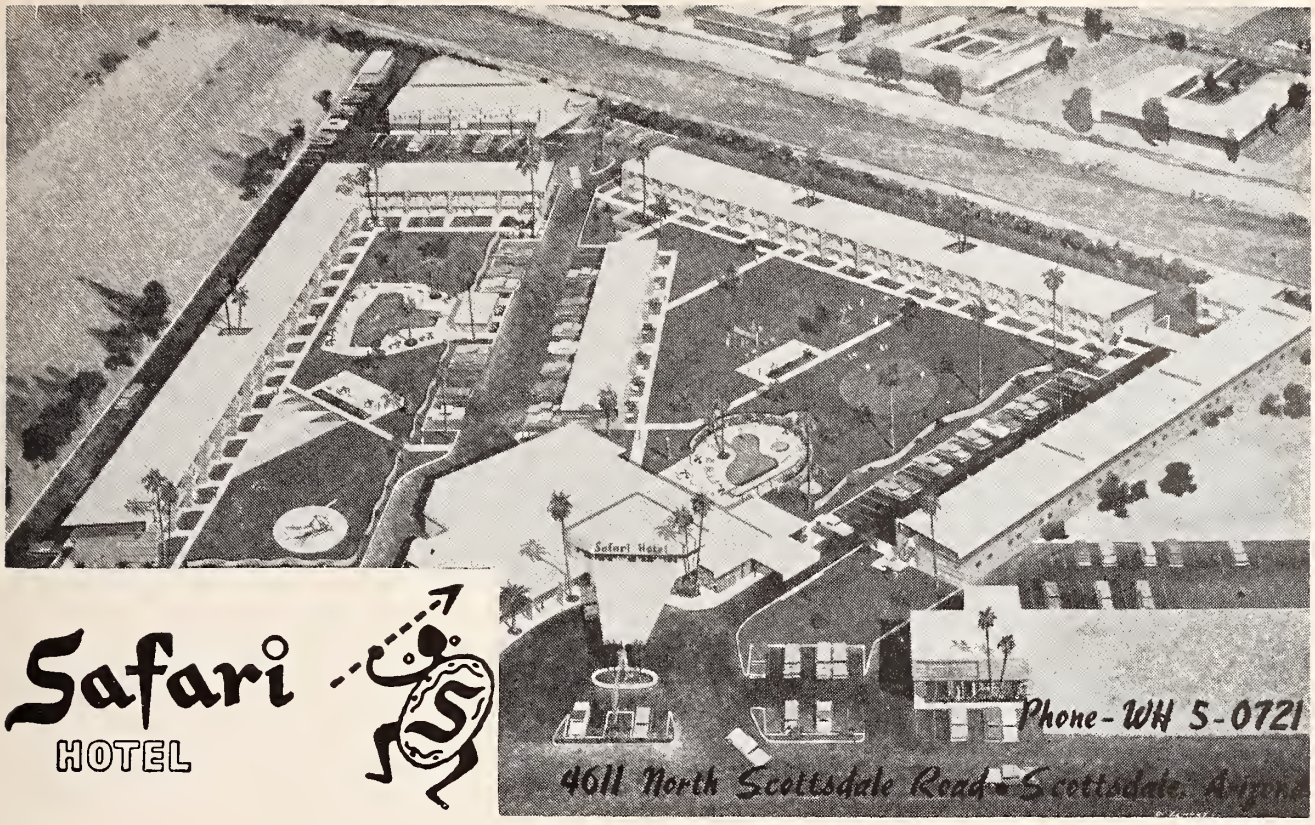
Directly relaxes smooth muscle spasm
Combats hypermotility
Non-mydriatic, may be used in glaucoma

Trocinate (Thiphenamil HCl) has been found in three clinical studies, (J. Mo. Med. Assoc., 48:685-6; Med. Rec. & Annals, 43:1104-6; J. Urol., 73:487-93), to be effective and to be virtually free of side-effects. Fifteen years of wide clinical usage has affirmed the safety and effectiveness of Trocinate.

DISPENSED IN BOTTLES OF
100, 250 AND 2000 TABLETS

Literature and samples sent upon request

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA
Manufacturers of ethical pharmaceuticals since 1856



Safari
HOTEL

UNIQUE TUCSON

FULLY-EQUIPPED

OFFICE RENTAL

Ready for immediate occupancy — an outstanding office availability in the long established, centrally-located Tucson Medical Square. This office is ideal for patient convenience. The air-conditioned office area is 1164 sq. ft., consisting of reception room, two examining rooms, a private office and fully-equipped laboratory. The office is completely furnished and decorated. These choice facilities can be yours now at an unusually reasonable rental rate. For additional information, contact:

CARLOS TOUCHE'

4431 E. Broadway **Tucson, Arizona**

Phone 327-6685

PARAMUS COIN EXCHANGE

The East's Largest Coin Exchange

OFFERS U.S. GOLD FOR YOUR FUTURE
ALL BRILLIANT UNCIRCULATED

$20 Gold pieces		**$3 Gold pieces**	
Liberty	$ 54.95		$349.00
St. Gaudens	$ 54.95	**$2.50 Gold pieces**	
$10 Gold pieces		Liberty	$ 52.95
Liberty	$ 32.95	Indian	$ 32.95
Indian	$ 52.95	**$1 Gold pieces**	
$5 Gold pieces		Type 1	$ 49.95
Liberty	$ 23.95	Type 2	$250.00
Indian	$ 32.95	Type 3	$ 75.00

SETS

Liberty Gold Type Set	4 Coins	$159.95
Indian Gold Type Set	4 Coins	$169.95

ALL COINS IN CUSTOM PLASTIC CASES

U. S. SILVER DOLLARS	Single	$2.00
BRILLIANT	Roll	$39.95
UNCIRCULATED	Bag	$1695.00

Gold and Silver is Today's Best Investment

Paramus Coin Exchange **A.N.A. Member**
Bergen Mall Shopping Center
Paramus, N.J. 07652 **201-342,2600**

Gentlemen: Please ship the following:

NAME

ADDRESS

CITY STATE

BILL MY D.C. ACCT. #.....

BILL MY AMER. EXP. ACCT. #.....

For other coin values send for free catalogue!

Constant care, supervision and companionship
are an integral part of the therapy program at Camelback Hospital.
Whether patients prefer restful hobbies such as TV viewing,
reading, conversing in the modern, comfortable rooms,
or enjoy more active out-of-doors recreation,
highly-trained, registered nurses are always nearby.



Located in the heart of the beautiful Phoenix citrus area near picturesque Camelback Mountain, the hospital is dedicated exclusively to the treatment of psychiatric and psychosomatic disorders, including alcoholism.

APPROVED BY THE JOINT COMMISSION ON ACCREDITATION OF HOSPITALS; and THE AMERICAN PSYCHIATRIC ASSOCIATION

Camelback Hospi

5055 North 34th
AMherst 4
PHOENIX, AR
ARIZONA FOUNDATION FOR NEUROLOGY AND PSYC

ETHICAL CONDUCT

Ethical conduct: Standards by which a physician may determine the propriety of his conduct in his relationship with patients, with colleagues, with members of allied medical professions, and with the public. A sense of what is fitting. Decorum.

On this July morning we find that Medicine as a group has taken an unpopular stand in a quasi-political atmosphere of NOT abetting a national socialistic trend, which, in turn, is the product of our present socio-economic environment.

We are functionaries and actuaries in a program so vast that as recently as one month ago there was as yet no united understanding and only a vague operating procedure including almost daily declarations of policy changes or re-evaluations.

Now we face individual antagonism, litigation, legislation, and an apparently hostile national press. We are held up to daily judgment both as individuals and as a group. The final judgment may well rest on the propriety of our conduct in our relationship with our PATIENTS, our COLLEAGUES, with MEMBERS OF ALLIED MEDICAL PROFESSIONS, and with the PUBLIC.

Roland F. Schoen, M.D.
Editor

HOBBY HORSE RANCH SCHOOL

A School For Exceptional Children

The Hobby Horse Ranch School is both home and school for a small group of children. It welcomes the child who is mentally retarded and physically handicapped as well as the backward child who suffers no physical handicap.

The Hobby Horse Ranch School is a branch of Fairview School in Fishkill, New York which was established in 1936.

Directors: Blanche C. Lightowler, B.A.

Matthew W. Lightowler

P.O.B. 44, Cortaro, Ariz.

ARIZONA MEDICINE

Roland F. Schoen, M.D. Editor
Mr. Bruce E. Robinson Managing Editor
Mrs. Evelyn Kuebler Editorial Assistant

ASSISTANT EDITORS
Original Articles
Mayer Hyman, M.D. — Preston J. Taylor, M.D.
Kenneth Johnson, M.D. — Robert F. Lorenzen, M.D.

Editorial Section
R. Lee Foster, M.D. — William B. McGrath, M.D.
John R. Green, M.D. — Leslie B. Smith, M.D.
John W. Kennedy, M.D.

ASSOCIATE EDITORS
Earl J. Baker, M.D. Civil Defense
Max Baumeister, Jr., M.D. Anesthesiology
Chester G. Bennett, M.D. General Surgery
William E. Crisp, Jr., M.D. Obstetrics and Gynecology
Philip E. Dew, M.D. Pediatrics
Charles W. Elkins, M.D. Neurosurgery
Eugene Leibsohn, M.D. Dermatology
James D. Nauman, M.D. Medical Society of U.S. & Mexico
William M. Hindman, M.D. Pathology
C. Thomas Read, M.D. Thoracic Surgery
Wallace A. Reed, M.D. Medical Economics
Paul L. Singer, M.D. Genito-Urinary
George A. Spendlove, M.D. Public Health
Alvin L. Swenson, M.D. Orthopedics
William G. Ure, M.D. Tuberculosis

Editorials of Arizona Medicine are the opinions of the authors and do not necessarily represent the official stand of The Arizona Medical Association, Inc. The opinions of the Board of Directors may be sought in the published proceedings of that body.

TWO STATEMENTS OF INTEREST FOR THE YEAR 1965

STATEMENT OF CONDITION:

1.

		BLUE CROSS	Blue Shield
WHAT WE HAVE:	Cash on Hand and in Banks	$ 562,275.53	$ 87,590.20
	Subscriber Payments and Other Receivables	813,119.84	173,056.65
	U. S. Government Bonds	2,327,760.00	955,000.00
	Land and Building	162,658.52	162,658.51
	Other Assets	2,603.75	
	TOTAL ASSETS	$3,868,417.64	$1,378,305.36
WHAT WE OWE:	Unearned Subscriber Payments	$ 657,449.57	$ 238,859.72
	Reserve for Undischarged and Unreported Cases	953,915.00	498,000.00
	Other Liabilities	884,128.26	136,493.83
	TOTAL LIABILITIES	$2,495,492.83	$ 873,353.55
WHAT WE HAVE SET ASIDE:	Legal Reserve	$ 25,000.00	$ 25,000.00
	Reserve Fund	1,347,924.81	479,951.81
	TOTAL LIABILITIES & RESERVES	$3,868,417.64	$1,378,305.36

STATEMENT OF OPERATION:

2.

INCOME	Blue Cross	Blue Shield
Earned Subscriber Income	$ 8,321,955.79	$3,722,479.99
Syndicated Group Income	2,854,736.15	1,727,843.77
TOTAL INCOME	$11,176,691.94	$5,450,323.76

HOSPITALIZATION EXPENSE	
Payment to Member Hospitals	$ 8,652,268.73
Supplemental Payments to Hospitals	497,591.81
Home Plan Bank Cases	562,146.63
Inter-Plan Bank Supplemental Payment Allowance	—169,966.99
Non-Member Cases	51,687.11
Net Change in Provision for Undischarged and Unreported Cases	164,580.00
Estimated Supplemental Payments	637,000.00
TOTAL HOSPITALIZATION EXPENSE	$10,395,307.27

PHYSICIANS' PAYMENTS	
Participating Physicians	$4,595,002.69
Non-Participating Physicians	216,909.11
Net Change in Provisions for Unreported Cases	—35,000.00
TOTAL PHYSICIANS' PAYMENTS	$4,776,911.80

OPERATING EXPENSES	Blue Cross and Blue Shield
Salaries	$ 655,065.14
Travel and Travel Items	72,415,85
Building and Equipment	85,942.25
Supplies, Postage, and Telephone	130,419.26
Dues, Legal, and Advertising	110,164.60
Other	173,853.68
TOTAL OPERATING EXPENSES	$1,227,860.78

	Blue Cross	Blue Shield
NET OPERATING INCOME	$ 193,925.58	$ 54,979.12
Other Income	89,021.15	31,459.02
Excess Provision for Supplemental Payments in 1964	65,813.19	
NET ADDITION TO RESERVES	$ 348,759.92	$ 86,438.14



ARIZONA

Blue CROSS
BLUE Shield

FLAGSTAFF: Box 624 / PHOENIX: 331 West Indian School Road / TUCSON: 2545 East Adams



for your well-being...and being well!

New
low-cost tetracycline/antifungal therapy

for broad-spectrum activity
plus specific antifungal prophylaxis
at significant patient savings

Whenever tetracycline is indicated in these candidates for Candida:

diabetic patients



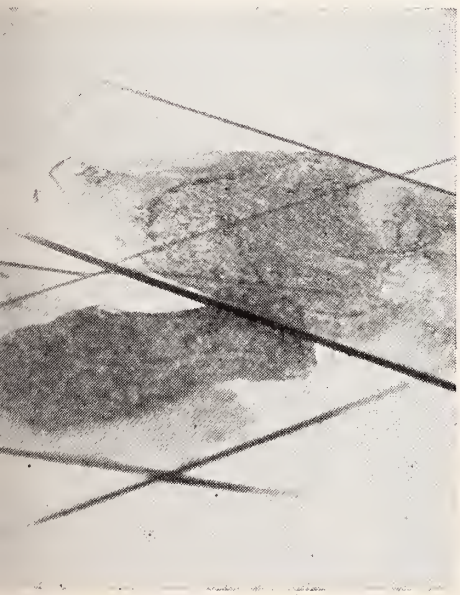
2. nonpregnant women with a history of recent or recurrent monilial vaginitis



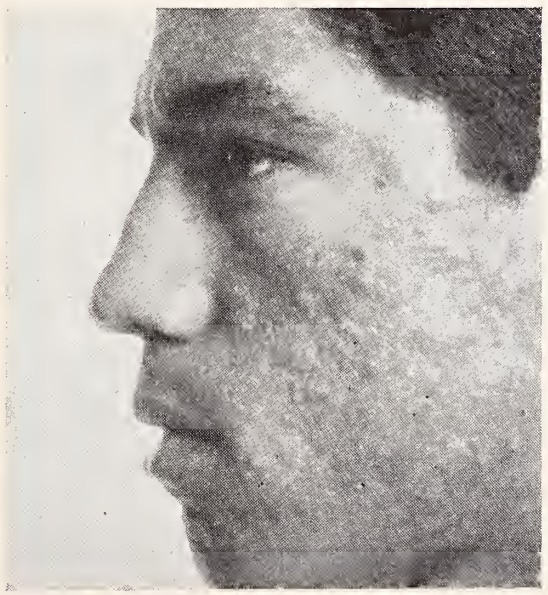
3. elderly or debilitated patients



patients with a past history of moniliasis



5. patients on long-term tetracycline or corticosteroid therapy



BRISTOL THERAPEUTIC SUMMARY: For complete information consult Official Package Circular. *Indications:* Infections of respiratory, gastrointestinal and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms, in patients with increased susceptibility to monilial infections. *Contraindications:* The drug is contraindicated in patients hypersensitive to its components. *Warnings:* Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. No cases of photosensitivity have been reported with Tetrex (tetracycline phosphate complex). With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood). *Precautions:* Bacterial superinfection may occur. Infants may develop increased intracranial pressure with bulging fontanels. In gonorrheal therapy, serologic tests for syphilis should be conducted initially and monthly for 3 months. *Adverse Reactions:* Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis, and allergic reactions may occur. *Usual Adult Dosage:* 1 capsule *q.i.d.* Continue therapy for 10 days in beta-hemolytic streptococcal infections. Administer one hour before or 2 hours after meals. *Supply:* Capsules, bottles of 16. Each capsule contains tetracycline phosphate complex equivalent to 250 mg. tetracycline HCl activity and 250,000 units of nystatin.

BRISTOL

BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York

Tetrex-F®

Each capsule contains tetracycline phosphate complex equivalent to tetracycline hydrochloride 250 mg. and nystatin 250,000 units.

Tetrex-F is priced lower than most tetracycline-antifungal products.



after surgery

B and C vitamins are therapy: Therapeutic amounts of B and C in stress formula vitamins often are vital during periods of physiologic stress. STRESSCAPS capsules, designed to meet increased metabolic demands, aid in achieving a more comfortable convalescence, a more rapid recovery. After surgery, as in many stress conditions, STRESSCAPS vitamins are therapy.



Stresscaps®

Stress Formula Vitamins Lederle

FOR PROFESSIONAL RECOMMENDATION ONLY

Each capsule contains:

Vitamin B_1 (Thiamine Mononitrate)	10 mg
Vitamin B_2 (Riboflavin)	10 mg
Vitamin B_6 (Pyridoxine HCl)	2 mg
Vitamin B_{12} Crystalline	4 mcgm
Vitamin C (Ascorbic Acid)	300 mg
Niacinamide	100 mg
Calcium Pantothenate	20 mg

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York Lederle

627-6—3613



CAUTION – MEDICARE IS HERE

Leslie B. Smith, M.D.

Public Law 89-97, an Act "To provide a hospital insurance program for the aged under the Social Security Act with a supplementary medical benefit program . . ." It is incongruous that after our successes of many years that the proponents of Medicare became successful during this period of the highest prosperity, with the highest amount and quality of medical care ever enjoyed and when the public concensus was not in favor of it.

The Medical Profession and its members are again displaying their noble principle and dedication to providing the best medical care under any and all circumstances. They have volunteered their time and know-how to succor the enemies of our society who have been responsible for this disgraceful perpetration.

There are, of course, many reasons or suppositions used to try to explain this "paradox," most of which do not disclose that it is the unrelenting efforts of the non-elected politicians (political advisors) who fill many of the continuing positions in our bureaucratic government. They have been in influential positions predating most of the Senators and Representatives. They have used their opportunities and training to promote their pet objectives and secret doctrines.

Under Secretary of the Department of Health, Education and Welfare, Wilbur J. Cohen, is a typical example of the "responsible" persons. He has been a working advocate of socialized medicine for many years and the principal author of proposed bills and laws. A listing of the organizations to which he has belonged evokes fearful anxiety. The Medicare Bill is defined as socialized medicine and openly called such by the socialists.

While we are having the privilege of "negotiating" with these super hucksters, we must keep in mind that they are in there to win as broad a program as they can to enhance their power. Their past performances reveal that they are not adverse to using tactics which will win, irrespective of social ethics and facts. Many of them are not adverse to a liberal potion of duplicity, withholding of facts, carelessness about the authenticity of their statements, with almost complete disregard of their intentions and ability to continue their promises of today.

The salesmanship for this legislation has been a masterpiece of modern hucksterism.

In three paragraphs of page six of the Act are statements of "PROHIBITATION AGAINST ANY FEDERAL INTERFERENCE" – "FREE CHOICE OF PATIENT GUARANTEED" – Then the Act sets forth in the next one hundred pages to state just what it will do and not do, showing that your doctor or the hospital of your choice may not be on the preferred list.

The hospitals have already had one rude awakening in that the daily charges for this group of patients can not be the daily average cost per patient because these chronic, longer-stay patients actually cost the hospital much less per day than the acute ill cases. The hospitals have had shadows cast upon their inclusion in the cost for educational activities, use of endowment funds, and the value of voluntary services — the struggle is just starting with the Big Government in dictatorial control.

One of the most effective pieces of propaganda was the dubbing we all got regarding the cost of all this Medicare — the slogan was — "for less than the price of a package of cigarettes each week." This was repeated by President Kennedy.

The original bill stated that the cost to the employee would be ¼% of his payroll up to $4,800, which is approximately 23c a week. The present Act calls for a .35% for the employee and employer, not on $4,800 but $6,600 which makes a total cost of $23 a year for each, which is about a 50% increase. The cost beginning in 1967 will be set at .5 %for each to produce a revenue from each of $33 (total $66). The cost of the employee's "package of cigarettes" has gone up to over 64c. It is the opinion of Insurance Actuaries that the cost will be many times that set forth in the law.

It is well to recall the gimmick foisted upon the people and the medical profession by that department of H.E.W. through the department of the National Institutes of Health. This department was given little money (about 1.38 billion dollars, 74 million more than it asked for) a little over a decade ago to do Medical research. It sent representation around the country to engender the good will and secure services of scientific research personnel and the Medical professions in general. Many were convinced that "Here at last," they have come up with a program to be supported by federal funds which will not be impaired by Federal molesting as specified in the written regulations — EFFORTS TO PROTECT THE SCIENTIFIC AND ACADEMIC FREEDOMS OF THE PRINCIPAL INVESTIGATOR — HE IS FREE TO PURSUE THE PROJECT IN WHATEVER MANNER HE DEEMS MOST PROMISING" (emphasis furnished). These idealistic principles were not law but changeable regulations, as such they were stricken from the rules. This prompted J. Russel Elkin, M.D., who at the beginning was an enthusiastic participant (he was a supported Scientific Investigator and Editor of the ANNALS OF MEDICINE), to conclude that this is a ". . . new and deplorable situation . . ." and predicted that if it continues to ". . . enforce restrictive regulations that encroach on the freedom of inquiry and productivity of the scientific community, much of the current scientific research and medical science will dry up and wither away."

The sales-pitch regarding the cost has been a stupid blunder, or a perpetuated lie, which many believed and still believe. By the title Medicare, a false impression was created that the program is for medical care whereas it concerns with incomplete hospital care and relatively no medical care. They have emphasized that it would be free from Federal interference with free choice for everybody, but it now turns out to be another government bureau but bigger than ever.

By its act of cooperation, formulation of regulations (changeable), apparent assistance in administration, and mouth-shut attitude toward this shift in political doctrines we must have appeared to have joined them — if you cannot whip them join them to "salvage what little we can for ourselves." We must, as always, protect our patients first and as much as possible — and always reveal that we have not debased our noble principles. There is no doubt that Medicare has been one of the great hoaxes of all times. Possibly we can, like the Phoenix bird, arise and fly again, as the most dedicated servants of mankind.



G. C. WILLIAMSON, M.D.
1914-1966

"The dust returns to the earth as it was,
But the spirit returns to God who gave it."

Death by coronary artery disease has taken from us a respected colleague, from his family a devoted father and husband, and from the Yuma community a beloved, dedicated practitioner.

While attending the annual meeting of the Arizona Medical Association in Scottsdale, Arizona, as a delegate of the Yuma County Medical Society, G. Calvin Williamson, M.D., suffered an acute coronary occlusion on April 29, 1966, and was hospitalized at the Scottsdale Baptist Hospital. Hopefully, and with silent prayers, the people of Yuma joined his family and his colleagues in awaiting the early news of his improvement, and we cheerfully conversed with him by telephone regarding the care of his patients in his absence, and listened to his description of his improvement. However, on May 6, 1966, we were shocked and grieved to learn that "Cal" was taken from us at the age of 51 years.

Gayland Calvin Williamson was born October 21, 1914, in Gifford, Illinois. He received his Bachelor of Science degree from the University of Illinois at Champaign-Urbana, and his Doctor of Medicine degree at the University of Illinois College of Medicine in 1942. He served his internship in the U.S. Navy during World War II, and became a flight surgeon in the Pacific theater of war, serving with distinction.

"Cal" came to Arizona in 1950, practiced in Safford for one year, then in Williams for one year, and finally moved to Yuma in 1952 where he has since served the community well.

He is survived by his mother, Mrs. Bertha Williamson of Urbana, Illinois, his wife, Marlene, and five children; Jon, an engineer for Lockheed in San Jose, California; Calvin David, a senior at the University of Arizona; Gretchen, a senior at Yuma KOFA High School; Priscilla, a junior at KOFA High School, and Andrew, in the 6th grade. Also, four brothers, Leland of Champaign, Illinois; Francis of Rockford, Illinois; Joseph, an attorney in Urbana; and William in Houston. And four sisters, Rowene Siener of Urbana; Ruth Stonefield and Emily, of Rockford, Illinois, and Betty Wallace of Houston.

And it can also be truthfully said that "Cal" is survived by his grieving colleagues, nurses and patients; for they, too, were his "family." His passing leaves a great void in our community. He was a personification of the real practicing BRAVE SAMARITAN, as described by Felix Marti-Ibanez — "That physician, that brave Samaritan, whose profile has been drawn here is the ideal for treating the patient of today. He is a physician who loves practicing his profession and therefore loves his patients, and because of his dedication he knows that even when he dies he will not die altogether, for through his work his dream will endure forever." He was a dedicated practitioner; skilled in both the science and art of medicine; modern in his technique and continued education; but he also retained that regretfully disappearing "old-fashioned" warmth of affectionate relationship with his patients, that commanded their love, cooperation and confidence.

We shall all miss "Cal" Williamson.

The Book of Wisdom says, "The third, least-considered friend, is the good deeds of man's life. These never desert him and even precede him to plead his cause before the King of Kings, as it is written: 'and your righteousness shall go before you.'"

A. I. Podolsky, M.D.

"son pouvoir antiémétique est élevé"*

Vomiting:
In Geneva they have a word for it

In Geneva, too, Dramamine is a familiar word. Like physicians the world over, they know that 'its antiemetic potency* is high" ("son pouvoir antiémétique est élevé").

Nausea and vomiting caused by infection or simple functional gastrointestinal disturbances are quickly controlled by this classic antinauseant.

Usual Adult Dosage: One or two tablets every four hours as needed.

Precautions: Dramamine, notably nontoxic itself, may mask the symptoms of streptomycin toxicity. Patients should be cautioned against operating automobiles or dangerous machinery because of possible drowsiness.

*Neyroud, M.: Praxis 44:648-650 (July 14) 1955.

Research in the Service of Medicine SEARLE

relied on round the world ■

Dramamine®

brand of
dimenhydrinate

classic antinauseant

Ampuls (for intramuscular or intravenous use)
Suppositories® / Liquid / Tablets

co–op.er.a.tion, co.op.er.a.tion, co.op.ēr.a.tion (kō–op'er–ā'shen), n. 1. a co–operating; joint effort the benefits of which are shared by all members.

UP TO $1,000 MONTHLY BENEFIT NOW AVAILABLE ON A STATEWIDE BASIS - MEANS STABILITY

Disability Insurance pays...not only when you're sick or injured...but also in "peace of mind" when you're well!
"The Only Known Substitute for Earning Power"

NATIONAL CASUALTY COMPANY

OF DETROIT, MICHIGAN

Arizona Representatives

PHOENIX ★ CHARLES A. de LEEUW
3424 NORTH CENTRAL AVENUE
(PHONE 266–2403)

TUCSON ★ RONALD E. DEITRICH
SUITE 9, PIMA PLAZA, 2030 E. BROADWAY
(PHONE 297-1158)

Approved and Recommended by the
MEDICAL ECONOMICS COMMITTEE AND THE COUNCIL ...SINCE 1953

Medical Center X-Ray and Clinical Laboratory

1313 North 2nd Street
Phoenix, Arizona
Phone ALpine 8-3484

DIAGNOSTIC X-RAY

CLINICAL PATHOLOGY **TISSUE PATHOLOGY**

ELECTROCARDIOGRAPHY **BASAL METABOLISM**

R. Lee Foster, M.D., F.A.C.R., F.A.C.P., Director *Martin L. List, M.D., Radiologist*

Diplomates of American Board of Radiology

Lorel A. Stapley, M.D., Consultant Pathologist

FEDERAL MEDICAL PROGRAMS

YOUR BENEFITS AND EXCLUSIONS

Under the MEDICARE LAW (Public Law 89-97)

Medicare Benefits Check List for Guidance of Eligible Senior Citizens

MEDICARE - PART A - HOSPITAL INSURANCE BENEFITS

COVERED (Benefits)	NOT COVERED (Exclusions) (Patient Must Pay)
HOSPITAL BENEFITS (Begin July 1, 1966)	
(1) UP TO 90 DAYS OF CARE IN A SEMI-PRIVATE ACCOMMODATION (BOARD AND ROOM IN A 2 TO 4 BED ROOM) IN AN APPROVED PARTICIPATING GENERAL HOSPITAL FOR EACH "SPELL OF ILLNESS", CERTIFIED AS REQUIRED AND RECERTIFIED IF THE STAY IS PROLONGED. (2) NON-CUSTODIAL CARE IN AN APPROVED TUBERCULOSIS OR PSYCHIATRIC HOSPITAL PROVIDED THE SERVICE IS CERTIFIED AS MEDICALLY REQUIRED AND IS REASONABLY EXPECTED TO IMPROVE THE PSYCHIATRIC CONDITION OR RENDER THE TUBERCULOSIS PATIENT NON-COMMUNICABLE. (3) ALL HOSPITAL SERVICES AND USE OF HOSPITAL EQUIPMENT NORMALLY FURNISHED TO INPATIENTS. (4) APPROVED DRUGS USED IN THE HOSPITAL. (5) BLOOD, EXCEPT THE FIRST 3 PINTS. (6) REGULAR HOSPITAL NURSES.	**(1) FIRST $40 OF THE HOSPITAL BILL FOR EACH "SPELL OF ILLNESS".** **(2) $10 PER DAY FROM 60 - 90 DAYS.** **(3) ALL HOSPITAL CHARGES AFTER 90 DAYS.** **(4) PSYCHIATRIC HOSPITAL CHARGES AFTER THE 190 DAY LIFETIME TOTAL.** **(5) THE FIRST 3 PINTS OF BLOOD.** **(6) PRIVATE DUTY NURSES.** **(7) ATTENDING PHYSICIAN'S BILL FOR SERVICES RENDERED.** **(8) PRIVATE ROOM COSTS UNLESS CERTIFIED AS MEDICALLY INDICATED.** **(9) SERVICES PROVIDED FOR ANY "SPELL OF ILLNESS" WHICH IS NOT CERTIFIED AS MEDICALLY NECESSARY.**
HOSPITAL OUTPATIENT BENEFITS (Begin July 1, 1966)	
(1) LABORATORY, X-RAY AND OTHER DIAGNOSTIC TESTS PERFORMED IN ANY 20 DAY PERIOD.	**(1) FIRST $20 AND 20% OF THE BALANCE OF COST OF TESTS PERFORMED IN EACH 20 DAY PERIOD.**
EXTENDED CARE SERVICES (Begin January 1, 1967)	
(1). UP TO 100 DAYS FOR EACH "SPELL OF ILLNESS", CERTIFIED AS REQUIRED. (2) ADMISSION MUST BE PRECEDED BY 3 OR MORE DAYS OF HOSPITALIZATION AND MUST OCCUR WITHIN 14 DAYS AFTER DISCHARGE FROM HOSPITAL FOR SAME "SPELL OF ILLNESS".	**(1) $5 PER DAY FROM 20 - 100 DAYS.** **(2) CUSTODIAL CARE.** **(3) CHARGES FOR SAME "SPELL OF ILLNESS" AFTER 100 DAYS.**
HOME HEALTH SRVICES (Begin July 1, 1966)	
(1) UP TO 100 HOME HEALTH VISITS PROVIDED UNDER A SPECIFIC MEDICAL PLAN BY AN APPROVED OR QUALIFIED HOME HEALTH AGENCY (SUCH AS THE VISITING NURSE SERVICE) DURING ONE YEAR. (2) CARE MUST FOLLOW A MINIMUM 3 DAY HOSPITAL STAY AND NOT LATER THAN 14 DAYS AFTER AND ENDING ONE YEAR AFTER DISCHARGE FROM THE HOSPITAL OR AN EXTENDED CARE SERVICE FOR THE SAME "SPELL OF ILLNESS".	**(1) COST OF DRUGS.** **(2) SERVICES RENDERED WITHOUT A PHYSICIAN-APPROVED PLAN OF TREATMENT.**

MEDICARE - PART B - SUPPLEMENTAL INSURANCE BENEFITS - (Premium:$3.00 per month per person)

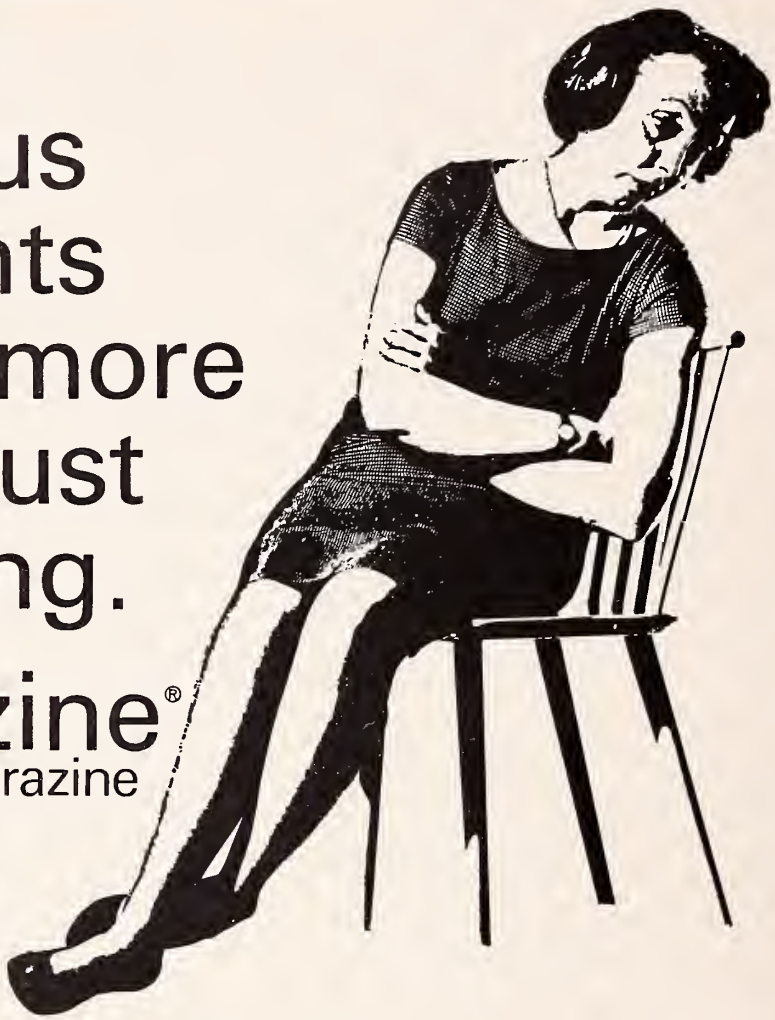
COVERED (Benefits)	NOT COVERED (Exclusions) (Patient Must Pay)
80% OF "REASONABLE CHARGES" INCLUDING: (1) PHYSICIANS SERVICES IN HOME, OFFICE AND HOSPITALS. (2) SERVICES AND APPLIANCES INCIDENTAL TO TREATMENT, INCLUDING SURGICAL DRESSINGS, SPLINTS AND CASTS, AND MEDICATIONS PATIENT CANNOT TAKE HIMSELF. (3) X-RAY, LABORATORY AND OTHER DIAGNOSTIC TESTS. (4) X-RAY, RADIUM, AND RADIOISOTOPE THERAPY. (5) RENTAL OF HOSPITAL BEDS, WHEELCHAIRS, OXYGEN TENTS, IRON LUNGS FOR USE AT HOME. (6) AMBULANCE SERVICE FOR CRITICALLY ILL PATIENTS ONLY. (7) ARTIFICIAL EYES, ARMS, LEGS, BRACES AND CERTAIN OTHER PROSTHETIC DEVICES.	(1) FIRST $50 AND 20% OF THE REMAINDER ON A CALENDAR YEAR BASIS. THIS DEDUCTIBLE APPLIES TO ALL COVERED SERVICES UNDER PART B. (2) ROUTINE DENTAL SERVICES. (3) MEDICATIONS PATIENT CAN TAKE HIMSELF. (4) ORDINARY AMBULANCE SERVICE. (5) PLASTIC SURGERY COSTS UNLESS REQUIRED BECAUSE OF ACCIDENT OR DISEASE. (6) ROUTINE PHYSICAL EXAMINATION. (7) EXAMINATION FOR HEARING AIDS OR EYE GLASSES. (8) FALSE TEETH, EYE GLASSES, HEARING AIDS, ORTHOPEDIC SHOES. (9) PERSONAL COMFORT ITEMS INCLUDING TV, PHONE.
HOME CARE SERVICES	
(1) HOME HEALTH CARE UP TO 100 VISITS BY VISITING NURSES, HOME HEALTH AIDES AND THERAPISTS, (PRIOR HOSPITALIZATION NOT REQUIRED). (2) ONE-HALF THE COST OF TREATMENT OF MENTAL PATIENTS UP TO TOTAL OF $250.	(1) CUSTODIAL CARE WITHOUT TREATMENT IN REST OR NURSING HOME. (2) 50% OF BILL UP TO A TOTAL OF $250 FOR PSYCHIATRIC PATIENTS AND 100% THEREAFTER. (3) ROUTINE PHYSICAL CHECK-UP.

Prepared and Edited by
Charles W. Steele, M.D., Lewiston, Maine

Reprinted with permission
American Society of Internal Medicine
3410 Geary Boulevard San Francisco, Calif. 94118
Available in quantities from ASIM

A consumer survey by the Pharmaceutical Manufacturers Association showed that while most people think prescription drugs cost too much, 82 percent of those interviewed said their last prescription did a good job and 70 percent said it was worth the cost.

Many anxious patients need more than just calming.



Stelazine®

brand of trifluoperazine

offers true tranquilization.

Sedative or muscle relaxant-type tranquilizers are often all that's needed for patients with temporary situational anxiety. But in the many patients whose anxiety presents a continuing problem these agents are limited by their generalized dulling effects.

'Stelazine' can attack anxiety directly without producing annoying dulling effects. On 'Stelazine', patients can react more normally to day-to-day stress yet remain alert, able to carry on their normal activities.

Contraindicated in comatose or greatly depressed states due to CNS depressants and in cases of existing blood dyscrasias, bone marrow depression and pre-existing liver damage. *Principal side effects,* usually dose related, may include mild skin reaction, dry mouth, insomnia, fatigue, drowsiness, dizziness and neuromuscular (extrapyramidal) reactions. Muscular weakness, anorexia, rash, lactation and blurred vision may also be observed. Blood dyscrasias and jaundice have been extremely rare. Use with caution in patients with impaired cardiovascular systems. Before prescribing, see SK&F product Prescribing Information.

SK&F Smith Kline & French Laboratories, Philadelphia

ABOUT COMMUNITY HEALTH SERVICES

by
John C. Foster, Executive Director

On May 9-10-11, the National Health Forum met in New York City. A group of 600 invited participants discussed the recommendations of a commission on Community Health Services.

While the report and the discussions have made no particular splash in the press and most physicians are unaware that the report was ever written, medical practice and all other health care may well find the recommendations steering the way for the next ten years. While most people know nothing of the report, the nation's health power structure (Congress, voluntary health agencies, public health agencies) will be molding public thought to accept (or demand) the recommendations.

As one of the three invited participants from Arizona, your Blue Shield Executive Director was able to not only sit in on the discussions, but also to form some impressions of the Forum itself.

The first impression gleaned was that there were too few practicing physicians in attendance. While a goodly portion had the letters "M.D." after their names, far too great a percentage was employed in health departments, medical schools, insurance companies, governmental agencies, and voluntary agencies. Too often was heard the comment, "When I was in practice . . ." In my humble opinion, the men who shape the destiny of medical practice should be more adequately represented by those who are practicing now.

A second impression gleaned from the meeting — one which would impress anyone in attendance — was the tremendous amount of work which obviously went into preparation of the report.

In order to confine this piece to the space at hand, I would like to briefly outline what I consider some of the important and possibly far-reaching recommendations made in the field of community health.

I. **Community of Solution:** The organization and delivery of community health services by both official and voluntary agencies must be based on the concept of a **Community of Solution,** rather than primarily on political jurisdictions.

 A. In order to establish health service boundaries, the Commission recommends that each state organize a Health Policy and Planning Commission to examine, with the State Health Department, the state's present pattern of health jurisdictions and recommend regional configurations of political units conforming to problemsheds or health marketing areas.

 B. Appropriate use must be made of compacts, agreements, interstate authorities and other procedures for expediting delivery of health services. Boundaries of the regions so established would be regularly assessed and revised for continuous adaptation to the changing dimensions of health problems.

II. **Comprehensive Personal Health Services:** Communities must take the action necessary to provide comprehensive health services of high quality to all their citizens. These services would include promotion of positive good health by application of early detection of disease, prompt and effective treatment, and physical, social, and vocational rehabilitation of those with residual disabilities.

A. This action would assure both availability and accessibility to all age groups. Among the services recommended are:
 1. Health education
 2. Family planning
 3. Environmental services
 4. Prevention of disease and disability
 5. School health and nutritional services
 6. Early diagnosis
 7. Treatment with systematic follow-up

B. Separate systems of health care for different groups of the population such as veterans, labor organizations, merchant seamen, and the indigent should be welded into community wide programs. Health care has become too complex and expensive to permit the continuance of multiple systems.

C. Hospitals and other health agencies should cooperate in developing facilities and services for patients who require care short of hospitalization, such as:
 1. Outpatient service
 2. Extended care facilities
 3. Home care programs
 4. Day centers for the old
 5. Foster family programs

D. In order to protect the public, the practice of medicine should be limited to those scientifically educated and licensed. A citizen commission should be established to create a uniform code providing licensure for all health professions and occupations. Public interest, experience and money that have been mobilized for comprehensive community mental health and retardation services should be integrated into community plans.

III. **The Personal Physician:** Every individual should have a personal physician to provide a continuity of integrated medical and medically related services.

A. The personal physician must have a broader knowledge of the elements of comprehensive health services than medical students now receive. The American Medical Association and the Association of Medical Colleges should take the initiative in developing specific recommendations for the education of the personal physician. This education should emphasize
 1. Preventive medicine
 2. Internal medicine
 3. Pediatrics
 4. Psychiatry
 5. Rehabilitation

B. The personal physician will provide the services needed or direct his patient to whatever services best suit his needs. He will maintain such relationship with other physicians and care facilities that will assure his patient twenty-four-hour, seven-day-a-week medical services.

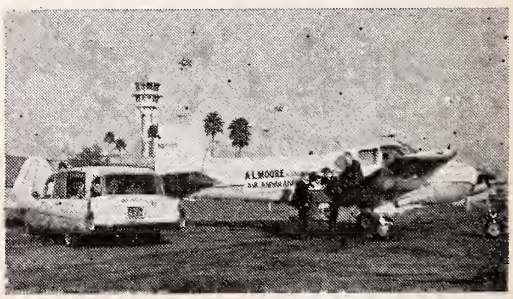
C. Group practice of medicine has demonstrated that it can provide quality comprehensive medical care effectively.

D. Development of an adequate supply of personal physicians will require a national effort providing appropriate educational opportunities and career incentives. Medical schools would find it necessary to alter their present intramural curricula and develop community based and community oriented programs.

IV. **The Environment:** Man can and must so manage his environment as to stimulate healthful growth, even though presently he is contaminating that environment at a rate fast approaching saturation. Moreover, people are using biological and chemical products indiscriminately, unaware for the most part, of their hazards. The need for citizen action is urgent.

We will continue these recommendations in the next issue of *Arizona Medicine*.

24-HOUR AMBULANCE SERVICE



MOTOR AND AIR

A. L. MOORE & SONS

Mortuary and Ambulance Service

Adams at Fourth Ave., Phoenix

AL 2-3411

Squaw Peak Sketches

Of Pithy Pioneer Physicians

by dry gulch jake



ITEM

This has nothing to do with Arizona, or medicine therein, but it is a fine piece of useless information, that may be of interest to some. In 1807 a physician, of the city of brotherly love, Philadelphia, induced a chemist, Townsend Speakman, to prepare carbonated water for his patients. Speakman added fruit juice as a flavor and the soft drink industry was started in this country.

The physician was a Dr. Phillip Syeng Physic, an appropriate name for a physician.

ITEM

A number of physicians, without a local medical school, ivory tower, tax free research institutes, red-white-and-blue HEW grants, great society platitudes, who spent a portion of their professional careers in the Territory and State made observations and contributions which remain unsullied and unsurpassed. The following is about a native born Mohave Apache Indian, who became a leader in medicine in Chicago where he practised for many years, but he is remembered most for his long fight against the injustices perpetuated upon his people by the Indian Bureau.

As a lad of four or five years old he was captured by the Pimas in a raid which they made on an Apache camp at Iron Mountain near Pinto Creek in the Four Peak area in the year 1870. He was captured along with his two sisters. He was sold to an itinerant Neopolitan photographer in Florence, Arizona, for thirty dollars.

Gentile, the photographer, a man of culture, vision and foresight educated the lad who secured an M.D. degree in 1889 from the University of Illinois. He decided to devote his talent in the aid of his people but after serving with the Indian Bureau for a time on an Indian reservation in the Dakotas, he resigned and devoted the remainder of his life to efforts to enlighten his Indian countrymen and the whites to the true situation on the reservations. At one time he was ordered off the Pima Reservation here in the Salt River and then from then on was disowned by his own people; they claimed that he had forsaken their ways and had taken the ways of the white man.

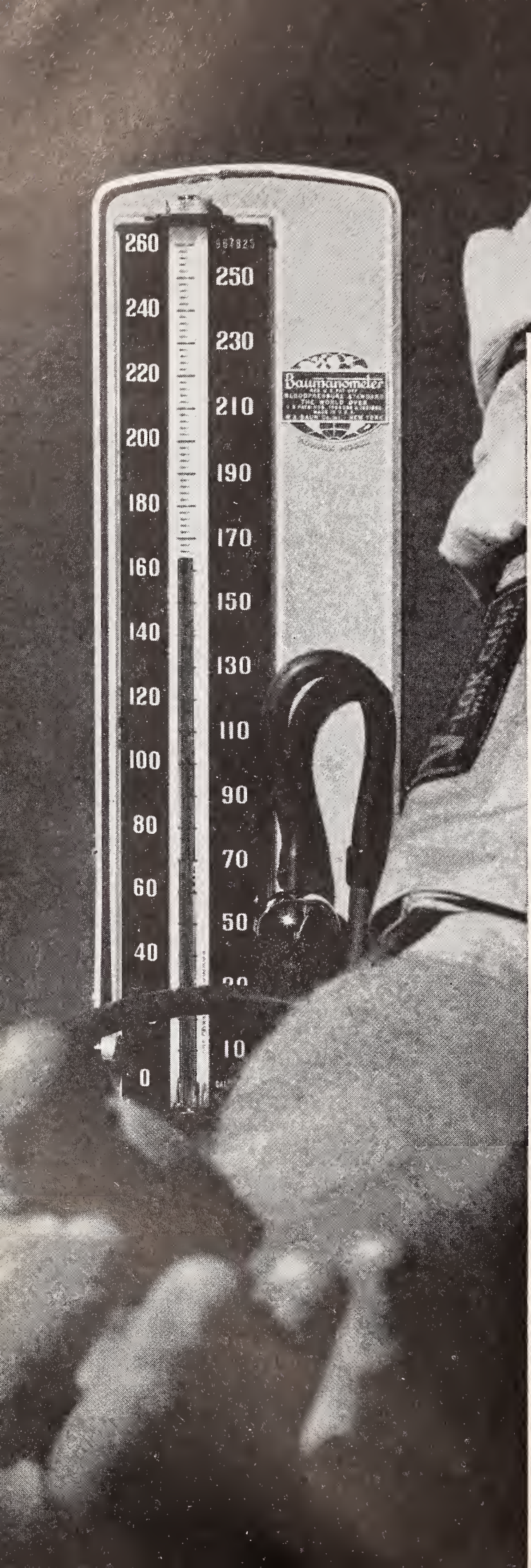
He entered private practise in Chicago, was an early specialist in gastroenterology and taught it to Chicago Post Graduate Medical School.

In 1922 he became ill, and when his own diagnosis of pulmonary tuberculosis was confirmed by fellow practitioners — left Chicago — and came to Fort McDowell on the Verde River. Here he threw up a primitive hogan, had an Indian girl prepare meager meals for him, refused all medical aid and two months later was dead in the year 1922.

Only in death was he again accepted by his people when they, the Indians, requested permission from the widow to carry his body from the chapel at Fort McDowell to the old fort cemetery about one mile distant to the west. All the time the Indians performed their burial chant, and here he lies at peace with his people and with himself within site of the Four Peaks as they gaze starkly on him from the East across the Verde Valley.

This was Dr. Carlos Montezuma, his Indian name Wassaja, and the vivid circumstances of his life have been carefully researched and related in "Savage Son" by Oren Arnold. The University of New Mexico Press, Albuquerque, 1951.

John W. Kennedy, M.D.



when readings indicate hypertension

Time for Naturetin®

SQUIBB BENDROFLUMETHIAZIDE

to reduce blood pressure

In the management of your hypertensive patients, Naturetin is good therapy to start with, good therapy to stay with.

In mild hypertension, Naturetin lowers blood pressure gradually toward normotensive levels. In long-term therapy, Naturetin may keep blood pressure low—for months, sometimes years. When used in combination with other antihypertensive agents, blood pressure often falls further—and lower doses of both drugs are usually possible.

Clinical trials have proven Naturetin effective—without serious side effects.[1,2] And, when used to treat patients with cardiac edema and hypertension, "in no instance did the concentration of serum potassium fall below 3.1 mEq. per liter."[3] (Normal range for serum potassium: 3.5-5.0 mEq./liter).[4]

When readings indicate hypertension, start with Naturetin, stay with Naturetin.

Contraindications: Severe renal impairment; previous hypersensitivity.

Warning: Ulcerative small bowel lesions have occurred with potassium-containing thiazide preparations or with enteric-coated potassium salts supplementally. Stop medication if abdominal pain, distension, nausea, vomiting, or G.I. bleeding occur.

Precautions: The dosage of ganglionic blocking agents, veratrum, or hydralazine when used concomitantly must be reduced by at least 50% to avoid orthostatic hypotension. Electrolyte disturbances are possible in cirrhotic or digitalized patients.

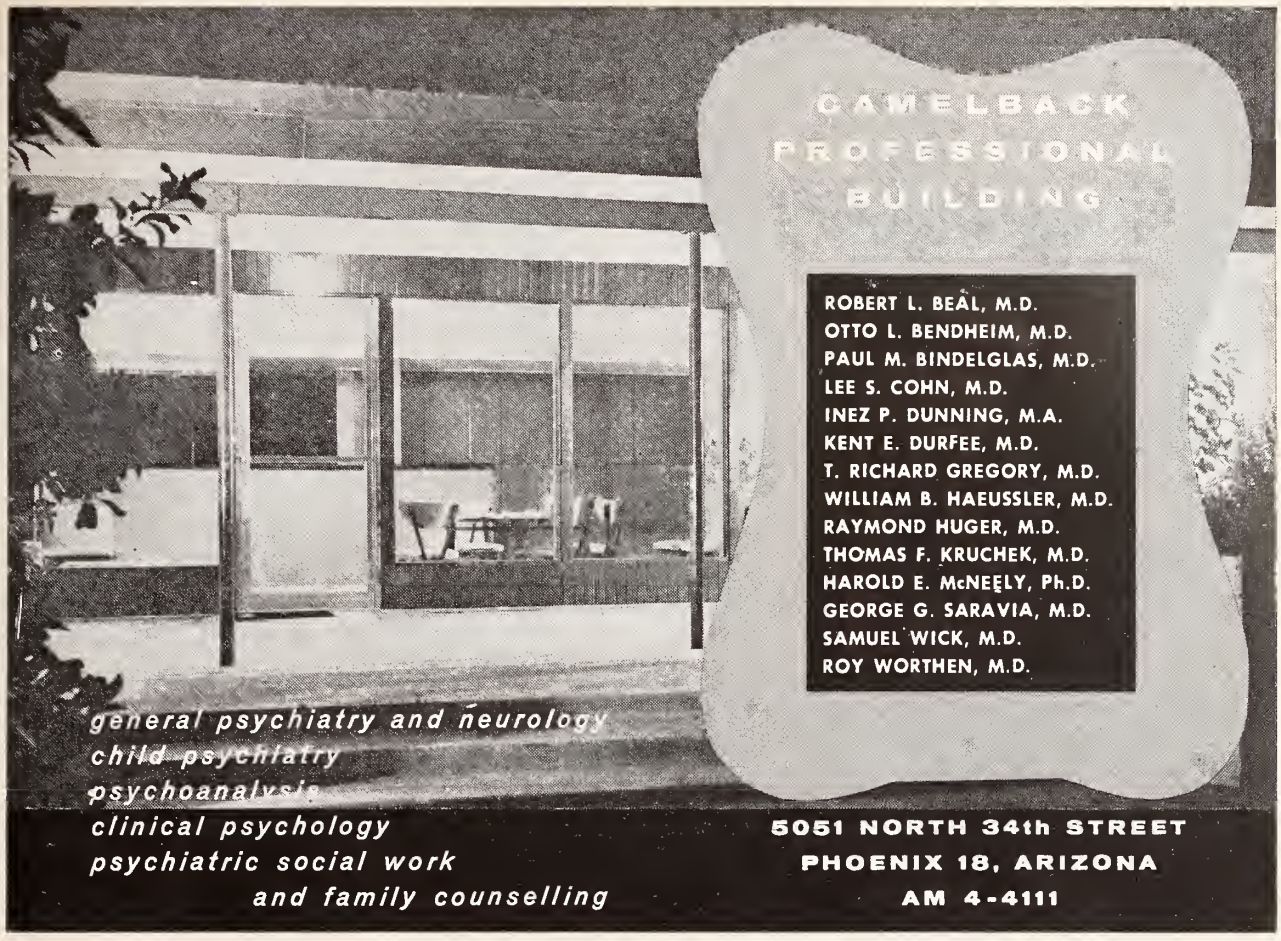
Side Effects: Bendroflumethiazide may cause increases in serum uric acid, unmask diabetes, increase glycemia and glycosuria in diabetic patients and may cause hypochloremic alkalosis, hypokalemia; cramps, pruritus, paresthesias, and rashes may occur.

Supplied: Naturetin (Squibb Bendroflumethiazide) 5 mg. and 2.5 mg. tablets. Also available—Naturetin c K [Squibb Bendroflumethiazide (5 or 2.5 mg.) with Potassium Chloride (500 mg.)]. For full information, see Product Brief.

References: 1. Telfeyan, S. A.: Clin. Med. *70*:1668, 1963. 2. Shepard, H. L.: J. Am. Geriatrics Soc. *11*:363, 1963. 3. Cummings, D. E.; Goodman, R. M., and Steigmann, F.: J. Am. Geriatrics Soc. *12*:161, 1964. 4. Castleman, B., ed.: New England J. Med. *268*:1462, 1963.

SQUIBB

Squibb Quality
—the Priceless Ingredient



ROBERT L. BEAL, M.D.
OTTO L. BENDHEIM, M.D.
PAUL M. BINDELGLAS, M.D.
LEE S. COHN, M.D.
INEZ P. DUNNING, M.A.
KENT E. DURFEE, M.D.
T. RICHARD GREGORY, M.D.
WILLIAM B. HAEUSSLER, M.D.
RAYMOND HUGER, M.D.
THOMAS F. KRUCHEK, M.D.
HAROLD E. McNEELY, Ph.D.
GEORGE G. SARAVIA, M.D.
SAMUEL WICK, M.D.
ROY WORTHEN, M.D.

general psychiatry and neurology
child psychiatry
psychoanalysis
clinical psychology
psychiatric social work
and family counselling

5051 NORTH 34th STREET
PHOENIX 18, ARIZONA
AM 4-4111

THE DIAGNOSTIC LABORATORY

Complete Medical Laboratory Service, X-Ray Diagnosis
Radiation Therapy, Radioactive Isotopes



PATHOLOGISTS
Maurice Rosenthal, M.D.
George Scharf, M.D.
Seymour B. Silverman, M.D.
Bland Giddings, M.D.
Sidney H. Zuber, M.D.

RADIOLOGISTS
1130 E. McDowell Office — 258-1601
Marcy L. Sussman, M.D.
1901 E. Thomas Road Office — 274-3603
Edward L. Batts, M.D.
William S. Stone, M.D.
George A. Gentner, M.D.

Diplomates of the American Boards of PATHOLOGY and RADIOLOGY

1901 East Thomas Road • Phoenix, Arizona • Phone 264-2101

skin

The cancer with the highest incidence: skin. The cancer with the highest mortality rate: lung. Both, ironically, the most preventable of all cancers.

Lung cancer kills some 47,000 Americans every year. Estimates are that more than 75% of lung cancers are caused by cigarette smoking... a preventable habit.

About 80,000 Americans develop skin cancer each year. Since its principal cause is excessive exposure to the sun, preventive measures are clear.

Basal cell and squamous cell carcinoma, commonest forms of skin cancer, are easily cured in their early stages. The high incidence of skin cancer, the suffering, disability and disfigurement which too often accompany it, make it a challenging problem.

In its program of bringing vital facts about cancer to the public, the Society has two new films, both available for showing through any ACS Unit. WHO, ME? dramatizes the hazards of cigarette smoking. SENSE IN THE SUN urges both sun workers and sun worshippers to exercise caution. Like all Society films, their object is to save lives and diminish suffering from cancer by giving forceful expression to many of the facts about cancer with which you, doctor, guide your patients.

american cancer society

lung

Physicians' Directory

ArMA

DIRECTORY AND CLASSIFIED RATES

• *Professional card and classified space is available at $3.50 for the first fifty words or less; 5c for each additional word thereafter.*

• *Mail copy to Business Manager, ARIZona MEDICINE, Post Office Box 128, Scottsdale, Arizona 85252, not later than the tenth of the month preceding publication.*

ALLERGY

E. A. GATTERDAM, M.D.
Fellow, American College of Chest Physicians
Fellow, American College of Allergists
Academy of Allergy

JOHN F. McKENNA, M.D.
Associate Fellow, American College of Allergists
Professional Building, 15 E. Monroe
Phoenix 4, Arizona — ALpine 4-2174

DANIEL H. GOODMAN, M.D., F.A.C.P.
Diplomate

American Board of Internal Medicine
and Subspecialty Board of Allegry

31 W. Camelback Road	500 W. 10th Place
Phoenix	Mesa
277-3337	969-3966

HOWARD M. PURCELL, JR., M.D.

JAMES A. SMIDT, M.D.

ALLERGY OF CHILDREN

American Board of Pediatrics
American College of Allergists

322 W. McDowell Rd. PHOENIX, ARIZONA

AL 2-9731

ROBERT HEALY STEVENS, M.D.

Fellow American College Chest Physicians
Allergy and Internal Medicine

The Medical Center
1313 N. 2nd Street
Phoenix 4, Arizona

DERMATOLOGY

GEORGE K. ROGERS, M.D.

DERMATOLOGY

Diplomate of American Board of
Dermatology and Syphilology

Phone ALpine 3-5264
105 W. McDowell Road Phoenix, Arizona

ONCOLOGY

JAMES M. OVENS, M.D.
F.A.C.S. F.I.C.S.

Diplomate American Board of Surgery
Cancer and Tumor Surgery
X-ray and Radium Therapy

333 W. Thomas Road Phone 279-7301
Phoenix 13, Arizona

ORTHOPEDIC SURGERY

THE ORTHOPEDIC CLINIC
ORTHOPEDIC SURGERY

W. A. Bishop, Jr., M.D., F.A.C.S.* — A. L. Swenson, M.D. F.A.C.S.* — Ray Fife, M.D., F.A.C.S.* — Sidney L. Stovall, M.D. F.A.C.S.* — Thomas H. Taber, Jr., M.D., F.A.C.S.*

Robert A. Johnson, M.D.* — Paul E. Palmer, M.D.*

*Diplomates of the American Board of Orthopedic Surgery

2620 N. 3rd Street — Phoenix, Arizona — CR 7-6211

Physicians' Directory

PATHOLOGY

LOUIS HIRSCH, M.D.
RALPH H. FULLER, M.D.
WILLIAM M. HINDMAN, M.D.
EDWARD A. BRUCKER, M.D.
ARTHUR D. SILVER, M.D.

Diplomates American Board of Pathology
Clinical Pathology — Pathologic Anatomy

1641 N. Tucson Blvd.
Tucson, Arizona

PSYCHIATRY

LEO RUBINOW, M.D.
PSYCHIATRY
AM 6-0630

224 E. Thomas Rd. Phoenix, Arizona

RADIOLOGY

R. LEE FOSTER, M.D., F.A.C.R., F.A.C.P.
MARTIN L. LIST, M.D., Radiologist
Diplomates of American Board of Radiology
Diagnostic Roentgenology

1313 N. Second St.
Phone ALpine 8-3484
Phoenix, Arizona

MARCY L. SUSSMAN, M.D., F.A.C.R.
Diplomate of American Board of Radiology

DIAGNOSTIC RADIOLOGY
THERAPEUTIC RADIOLOGY
RADIOISOTOPES

1130 E. McDowell Rd.
Phoenix, Arizona
ALpine 8-1601

540 Wells Fargo
Scottsdale, Arizona
WHitney 5-3959

This Space
Available for
Professional Card
Listing

Pharmacy Directory

Fairmont Pharmacy
3231 East McDowell Road Phoenix, Arizona
PRESCRIPTIONS — DRUGS — COSMETICS — FOUNTAIN
BRidge 5-5719 FREE DELIVERY

In Scottsdale call
Lute's Scottsdale Pharmacy
For
PRESCRIPTIONS
WH 5-8420 — WH 5-8429
Next to the 1st National Bank

This Space
Available



Pharmacy Directory

Serving Arizona
Health Needs
Since 1908

Ryan-Evans
DRUG STORES

Phoenix - Tucson - Scottsdale - Mesa - Tempe
Maryvale - Glendale - Westown - Sunnyslope
Paradise Hills - Carefree - Apache Junction
Globe - Miami - Casa Grande - Wickenburg

Classified

DOCTOR'S CENTRAL DIRECTORY

Helen M. Barrasso, R. N., Director
For Emergencies or in Absence of Your Doctor

CALL EA 7-7471

At Your Service 24 Hours Daily

2807 East Speedway Tucson, Arizona

"Established 1932"

DANNY T. SEIVERT INSURANCE

Malpractice & Non-Cancelable Disability with Guaranteed Rates

Professional Programs for Professional Men

Del Webb's TowneHouse — Suite 1700
100 W. Clarendon — Phoenix
Telephone 277-1487

Classified

Private practice available for Board certified or Board eligible Internist at Cottonwood, Arizona. New hospital facilities available, plus office space. Estimated income of approximately $30,000 for first year. Any other necessary information please contact Roland W. Wilpitz, Administrator, Marcus J. Lawrence Memorial Hospital, P. O. Box 548, Cottonwood, Arizona 86326.

Opportunity for General Practitioner in St. Johns, Arizona. County seat of Apache County with at least 3000 people in the trade area. Large fully equipped office facilities, plus X-ray, laboratory and emergency rooms. Results of Sears Foundation Economic Survey available. Contact Medical Service Committee, P. O. Box 296, St. Johns, Arizona.

Situation Wanted: Board Certified General Surgeon desires to re-locate to Arizona; age 40 yrs.; married with family; no objection to limited GP; available for personal interview for mutual evaluation. Reply Box 64-3, Box 128, Scottsdale, Ariz.

available to members

"MEDICINE IN TERRITORIAL ARIZONA"

by
Frances E. Quebbeman

$7.50 each

ARIZONA MEDICAL ASSOCIATION
BOX 128 SCOTTSDALE, ARIZONA

Index to Advertisers

Ames Co., Inc.
Dextrostix Inside Back Cover

Baptist Medical Center 511
Blue Cross/
Bristol Lab
Tetrex-F 545
Burroughs-Wellcome & Co., Inc.
Polysporin 536

Camelback Hospital 542
Camelback Professional Building 559
Classified 563

Diagnostic Laboratory 559
Doctors' Central Directory 563

Eli Lilly & Co.
Cordran Front Cover
Ilosone 512

First National Bank of Arizona 511

HBA Life Insurance Co. 510
Hewlett-Packard Company, Sanborn Division
Patient Monitoring System 537
Hobby Horse Ranch School 543
Hospital Medical Center, Ltd. 511
Hynson, Westcott & Dunning, Inc.
BSP Disposable Unit 503

Lederle Laboratories
Declomycin 532
Stresscaps 546

Medical Center X-Ray Laboratories 551
Moore & Son Air Ambulance Service 556

National Casualty Company 551

Paramus Coin Exchange 541
Parke Davis & Co.
.....Inside Front Cover
Directory 562, 563
Phoenix McLeod Optical Co. 533
Physicians Directory 561, 562
Pitman-Moore Division of The Dow Chemical Co.
Novahistine-LP 503-507
Poythress & Co., Inc., William P.
Trocinate 540

Roche Laboratories
Valium Back Cover

Safari Hotel 541
Sanborn Division, Hewlett-Packard Company
Patient Monitoring System 537
Searle & Co., G. D.
Dramamine 550
Shults Realty Co. 536
Sievert, Danny T.
Insurance 563
Smith Kline & French Laboratories
Stelazine 554
Squibb, E. R.
Naturetin 558

Touché, Carlos 541
Tutag & Co., S. J.
Aquatag 533

Valley National Bank 540

Winthrop Laboratories
NTZ Nasal Spray 504

Arizona Medicine

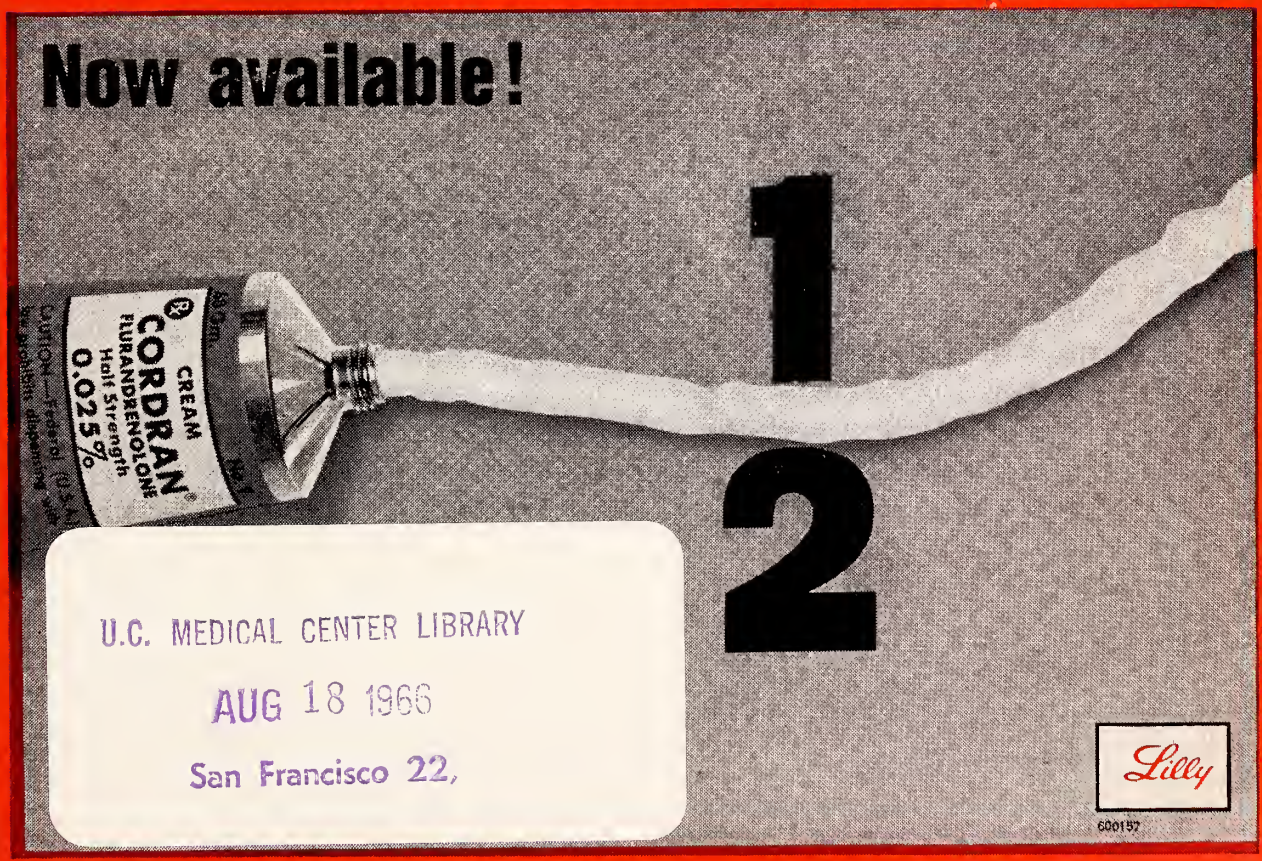
JOURNAL OF ARIZONA MEDICAL ASSOCIATION
MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO

AUGUST 1966
VOL. 23, NO. 8

FEATURES:

MASSIVE PULMONARY EMBOLISM: DIAGNOSIS AND TREATMENT 577
Lee B. Brown, M.D.
Robert Diserens, M.D.
Marian Molthan, M.D.
Arthur R. Nelson, M.D.
Daniel T. Cloud, M.D.
Wallace A. Reed, M.D.
Howard Kravetz, M.D.

DISCOURAGING? YES! HOPELESS? NO! 593
Paul B. Jarrett, M.D.



U.C. MEDICAL CENTER LIBRARY
AUG 18 1966
San Francisco 22,

Dilantin®
(diphenylhydantoin)

PARKE-DAVIS

27 years of clinical use... and still the most widely prescribed agent of its kind

Complete information for usage available to physicians on request. 81966

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

1866 1966 100th ANNIVERSARY

Reese, H. H.: *Wisconsin*
M. J. 15:344, 1939.
higan M. Soc. 38:317,

oran, T. H.: *Ann. Int.*

utnam, T. J.: *Arch. Neu-*
053, 1939.
l Sc. 85:986, 1939.
l, D. L., Jr., and Arnold,
nth. 66:522, 1939.

Osgood, R.: *J.A.M.A.*

nnett, C. L.: *Psychiat.*

Vashington Bull. 3:16.

ldstein, H. H.: *Am. J.*
940.
son, V.: *Ann. Int. Med.*

. M.A.J. 43:157, 1940.

ulane Med. Fac. 1:2,

Times 69:461, 1941.
Shallenberger, D. W.:
383, 1941.
Bull. Veterans Admin.

t 61:178, 1941.

ec. 155:105, 1942.
n. J. Psychiat. 98:515,

.A. 120:449, 1942.
J. Psychiat. 99:231,

nes 70:244, 1942.
renner, C.: *J. Nerv. &*
942.
ieff, A. J.: *J.A.M.A.*

Queries & Minor Notes: *J.A.M.A.* 124:200, 1944.
Gingrass, R. P.: *Wisconsin M. J.* 43:934, 1944.
Vallotton, C. F.: *Virginia M. Month.* 71:159, 1944.

Butter, A. J. M.: *J. Neurol. Neurosurg. & Psychiat.* 8:49, 1945.
Lennox, W. G.: *M. Clin. North America* 29:1114, 1945.

Bashinsky, B.: *J.M.A. Georgia* 35:228, 1946.

Twitchell-Allen, D.: *Arch. Neurol. & Psychiat.* 57:617, 1947.
Keith, H. M.: *Am. J. Dis. Child.* 74:140, 1947.
Wigton, H. A.: *Nebraska M. J.* 32:272, 1947.
Hoefer, P. F. A.; Hoff, H. H., and Pluvinage, R. I. L.: *Tr. Am. Neurol. A.* 72:185, 1947.

Fabing, H. D., and Hawkins, J. R.: *Ohio M. J.* 44:257, 1948.
Thorne, F. C.: *Am. J. Psychiat.* 104:570, 1948.
DeJong, R. N.: *Am. Practitioner* 3:233, 1948.
Tudor, R. B.: *J. Lancet* 68:391, 1948.

Yannet, H.; Deamer, W. C.,and Barba, P. S.: *Pediatrics* 4:677, 1949.
Silverstein, A.: *Am. Practitioner* 3:344, 1949.
Lennox, M. A.: *Am. J. Dis. Child.* 78:868, 1949.

Roseman, E.: *Postgrad. Med.* 8:419, 1950.
Ruskin, D. B.: *Am. J. Psychiat.* 107:415, 1950.
Chaiken, B. H.; Goldberg, B. I., and Segal, J. P.: *New England J. Med.* 242:897, 1950.

Forster, F. M.: *J.A.M.A.* 145:211, 1951.
Bakwin, R. M., and Bakwin, H.: *J. Pediat.* 39:776, 1951.
Ransone, J. T.: *Virginia M. Month.* 78:303, 1951.

Sokolova, E. I.: *Zhur. nevropat. i psikhiat.* 53:385, 1953.

Davidson, D. T., Jr., and Lombroso, C.: *New England J. Med.* 251:853, 897, 1954.
Hopkins, S. J.: *Chemist & Druggist* 161:628, 1954.
Hernandez, R., L.: *J. Am. M. Women's A.* 9:188, 1954.

Drew, A. L.: *Postgrad. Med.* 18:327, 1955.
Williams, E. Y., and Carmichael, C. P.: *J. Nat. M. A.* 47:162, 1955.
Millichap, J. G.; Lombroso, C. P., and Lennox, W. G.: *Pediatrics* 15:705, 1955.

Murphy, J. T., and Schwab, R. S.: *J.A.M.A.* 160:385, 1956.
Livingston, S.: *Postgrad. Med.* 20:584, 1956.
Gruber, C. M., Jr.; Mosier, J. M.; Grant, P., and Glen, R.: *Neurology* 6:640, 1956.
Levy, L., and Shanbrom, E.: *Arch. Int. Med.* 97:599, 1956.
Utterback, R. A.: *Am. Pract. & Digest Treat.* 7:763, 1956.
Zimmerman, F. T.: *New York J. Med.* 56:2537, 1956.

Berry, R. G., in Spiegel, E. A. (ed.): Progress in Neurology and Psychiatry, New York, Grune & Stratton, 1957, vol. 12, pp. 199-211.
Daly, D. D.: *Proc. Staff Meet. Mayo Clin.* 32:257, 1957.
French, E. G.: *Am. J. Psychiat.* 113:629, 1957.
Maltby, G. L.: *J. Maine M. A.* 48:257, 1957.

Rupp, C., Jr.: *J.A.M.A.* 166:1967, 1958.
Peterman, M. G.: *Minnesota Med.* 41:196, 1958.
Livingston, S.: *J. Lancet* 78:182, 1958.
Carter, C. H.: *Arch. Neurol. & Psychiat.* 79:136, 1958.
Keith, H. M.: *J. Lancet* 78:461, 1958.
Farmer, T. W.: *South. M. J.* 51:173, 1958.

Yahr, M. D., and Merrit
Neurol. 1:76, 1959.
Thomas, M. H.: *J.A.M.*
Peterman, M. G., and T
Times 87:1044, 1959.
Bray, P. F.: *Pediatrics*
Mulder, D. W.; Daly, D.
and Yoss, R. E.: *Postgr*
1959.
Forster, F. M.: *Wiscons*
1959.
Robertson, E. G.: *Post*
1959.

Schwade, E. D.: *Geriat.*
Schade, G. H., and Gof
25:151, 1960.
Forster, F. M.: *Postgra*
1960.
Livingston, S.: *J.A.M.A*
Friedlander, W. J.: *Am*
1960.

Kane, C. A.: *Boston Me*
1961.
Holowach, J.; Renda,
J. Pediat. 59:339, 196
Baker, A. B.: *J. Lancet*
Roseman, E.: *Neurolo*

Gruber, C. M., Jr.; Bro
M.: *Clin. Pharmacol. &*
Walker, A. E.: *World N*

Pauli, L. L.: *Maryland I*
Livingston, S.: *Clin. Pe*
Forster, F. M.: *M. Clin.*
47:1579, 1963.
Scholl, M. L.: *New Eng*
269:1304, 1963.

Kutt, H.; Winters, W.;
McDowell, F.: *Arch. N*
Currier, R. D.: *GP* 30:1
Chao, D.; Sexton, J. A.
J. Pediat. 64:499, 196

to help restore and stabilize the intestinal flora

LACTINEX®

TABLETS & GRANULES

for fever blisters and canker sores of herpetic origin

LACTINEX contains a standardized viable mixed culture of *Lactobacillus acidophilus* and *L. bulgaricus* with the naturally occurring metabolic products produced by these organisms.

LACTINEX was introduced to help restore the flora of the intestinal tract in infants and adults.[1,2,3,4]

LACTINEX has also been shown to be useful in the treatment of fever blisters and canker sores of herpetic origin.[5,6,7,8]

No untoward side effects have been reported to date.

Literature on indications and dosage available on request.

HYNSON, WESTCOTT & DUNNING, INC.

HWD

BALTIMORE, MARYLAND 21201

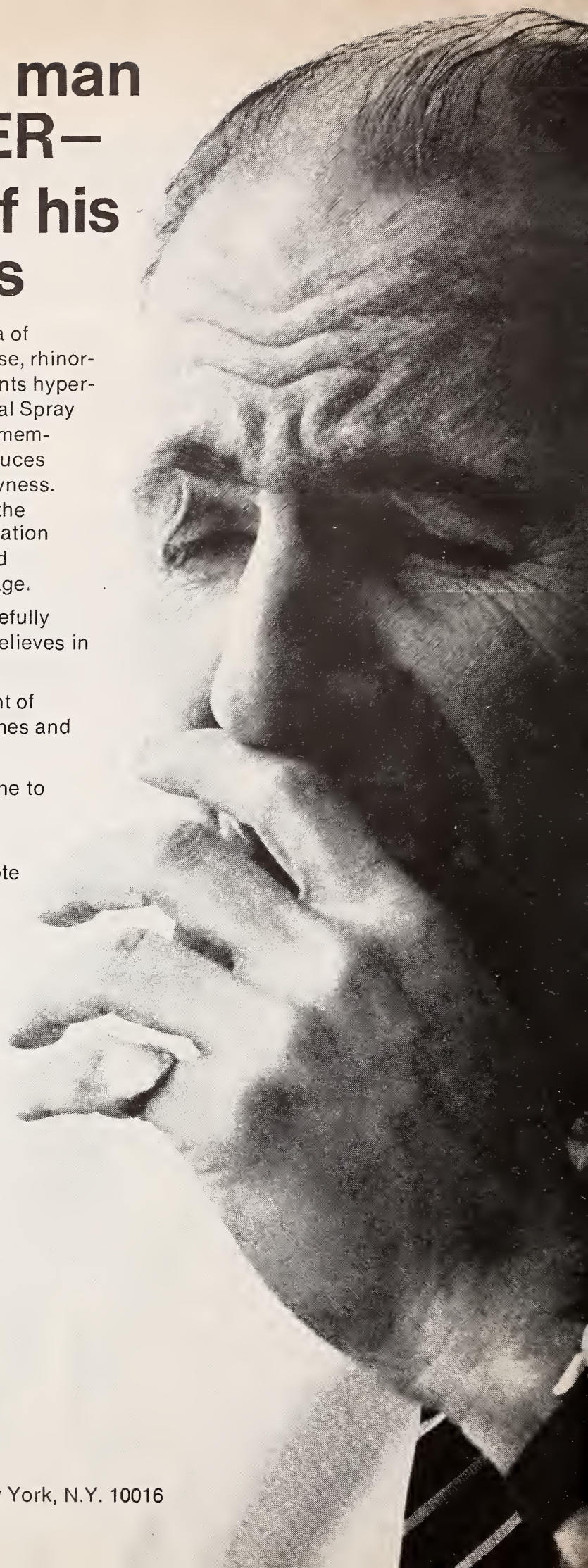
(LX03)

nces: (1) Siver, R. H.: CMD, *21*:109, September (2) Frykman, H. H.: Minn. Med., *38*:19-27, y 1955. (3) McGivney, J.: Tex. State Jour. Med., 18, January 1955. (4) Quehl, T. M.: Jour. of a Acad. Gen. Prac., *15*:15-16, October 1965. (5) es, D. J.: N.Y. State Jour. Med., *58*:2672-2673, August 1958. (6) Weekes, D. J.: EENT Digest, *25*:47-59, December 1963. (7) Abbott, P. L.: Jour. Oral Surg., Anes., & Hosp. Dental Serv., 310-312, July 1961. (8) Rapoport, L. and Levine, W. I.: Oral Surg., Oral Med. & Oral Path., *20*:591-593, November 1965.

LX

Once merely a man with HAY FEVER—

now a victim of his own antibodies



Whatever term describes him in this new era of immunology, the symptoms of congested nose, rhinorrhea and sneezing haven't changed in patients hypersensitive to pollens and molds. But NTZ® Nasal Spray relieves the symptoms. It decongests nasal membranes on contact, relieves itching and reduces excessive rhinorrhea without unpleasant dryness. The first spray of well-tolerated NTZ shrinks the turbinates, helps restore normal nasal ventilation and breathing. After a few minutes, a second spray enhances sinus ventilation and drainage.

More than a simple vasoconstrictor, the carefully balanced formula of effective components relieves in three ways with:

- **N**eo-Synephrine® HCl 0.5%, a decongestant of unexcelled efficacy to shrink nasal membranes and allow more comfortable breathing.
- **T**henfadil® HCl 0.1%, a topical antihistamine to help relieve itching and rhinorrhea.
- **Z**ephiran® Cl 1:5000, an excellent wetting agent and antiseptic preservative to promote the rapid spread of components to less accessible nasal areas.

Supplied in convenient pocket-size plastic spray bottle of 20 ml. Also available as a solution of 30 ml. (1 fl. oz.) with dropper, and 473 ml. (1 pint).

Prescribe

NTZ® Nasal Spray

(contains Neo-Synephrine HCl)

Winthrop Winthrop Laboratories, New York, N.Y. 10016

Arizona Medicine

JOURNAL OF ARIZONA MEDICAL ASSOCIATION

MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO

August 1966
Vol. 23, No. 8

Table of Contents

ORIGINAL ARTICLES

MASSIVE PULMONARY EMBOLISM: DIAGNOSIS AND TREATMENT 577
Lee B. Brown, M.D.
Robert Diserens, M.D.
Marian Molthan, M.D.
Arthur R. Nelson, M.D.
Daniel T. Cloud, M.D.
Wallace A. Reed, M.D.
Howard Kravetz, M.D.

PREMATURITY AND ADAPTIVE BEHAVIOR IN MENTAL RETARDATES 589
Byron C. Moore, Ed.D.

PRESIDENT'S PAGE

DISCOURAGING? YES! HOPELESS? NO! 593
Paul B. Jarrett, M.D.

DEAN'S PAGE

A TEACHING HOSPITAL — I 597
Merlin K. DuVal, Jr., M.D.

EDITOR'S PAGE

THIS AIN'T NO TIME TO BLOW OUR COOL 599
Roland F. Schoen, M.D.

EDITORIALS

PRINCIPLES OF MEDICAL ETHICS — Section 1 and 2 601
Roland F. Schoen, M.D.

NERVOUS PATIENT 603
William B. McGrath, M.D.

IN MEMORIAM

EARLE WOOD PHILLIPS, M.D. 605
URSUS VICTOR PORTMANN, M.D. 606
VIRGINIA MURRAY COBB, M.D. 607

FEDERAL MEDICAL PROGRAMS 609

BLUE SHIELD

ABOUT COMMUNITY HEALTH SERVICE 615
John C. Foster, Executive Director

SQUAW PEAK SKETCHES 557

TOPICS OF CURRENT MEDICAL INTEREST

ArMPAC APPOINTS CANDIDATE SELECTION COMMITTEES 620
FEDERAL SERVICES COMMITTEE PROGRAM 620

DIRECTORY

OFFICERS AND COMMITTEES 570
MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO 570
SOCIEDAD MEDICA DE ESTADOS UNIDOS DE NORTE AMERICA Y MEXICO....570
WOMAN'S AUXILIARY 570
INDEX TO ADVERTISERS Inside Back Cover

Published monthly by The Arizona Medical Association, Inc., with offices at 4601 N. Scottsdale Rd., Suite 201, Scottsdale, Arizona 85251. Subscription $5 a year, single copy 50 cents. Second class postage paid at Scottsdale, Arizona, and at additional mailing offices.


only one in the morning
and one in the evening

Now b.i.d. convenience plus even greater patient savings over q.i.d. tetracycline therapy

(plus all the advantages of tetracycline phosphate complex)

new Tetrex bidCAPS™*

(tetracycline phosphate complex)

Maximum patient savings. New bidCAPS now enable you to prescribe tetracycline in an even more economical, more convenient form. Your patient's prescription dollar gets maximum value: a daily bidCAPS dose is priced lower than any other leading brand of tetracycline—b.i.d. or q.i.d.

Well tolerated. Tetrex (tetracycline phosphate complex) is well tolerated. Side effects are few and, to date, no photodynamic reactions have been reported.

More of the active antibiotic in the blood. The basic tetracycline in Tetrex (tetracycline phosphate complex) is less bound to serum protein than is demethylchlortetracycline.[1] Result: Tetrex (tetracycline phosphate complex) provides a higher percentage of active antibiotic in the blood.

Available in bottles of 16 and 50.

BRISTOL

BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York

BRISTOL THERAPEUTIC SUMMARY: For complete information consult Official Package Circular. *Indications:* Infections of respiratory, gastrointestinal and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms. *Contraindications:* The drug is contraindicated in individuals hypersensitive to tetracycline. *Warnings:* Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. No cases of photosensitivity have been reported with tetracycline phosphate complex. With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood). *Precautions:* Mycotic or bacterial superinfection may occur. Infants may develop increased intracranial pressure with bulging fontanels. In gonorrheal therapy, serologic tests for syphilis should be conducted initially and monthly for 3 months. *Adverse Reactions:* Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis and allergic reactions may occur. *Usual Adult Dose:* 500 mg. b.i.d. Continue therapy for 10 days in beta-hemolytic streptococcal infections. Administer one hour before or two hours after meals.

References: 1. Roberts, C. E., Jr.; Perry, D. M.; Kuharic, H. A., and Kirby, W. M. M.: A. M. A. Arch. Int. Med. *107*:204 (Feb.) 1961.

*Each bidCAP contains Tetrex (tetracycline phosphate complex equivalent to 500 mg. tetracycline HCl activity).

Directory

THE ARIZONA MEDICAL ASSOCIATION, INC.
Organized 1892 P. O. Box 128
Scottsdale, Arizona 85252

OFFICERS AND DIRECTORS 1966-67

Paul B. Jarrett, M.D. President
2021 North Central Ave., Phoenix, Arizona

Arnold H. Dysterheft, M.D. President-Elect
McNary Hospital, McNary, Arizona

Arthur V. Dudley, Jr., M.D. Vice President
Bldg. 23, Medical Square, 1601 N. Tucson Blvd., Tucson, Arizona

Charles E. Henderson, M.D. Secretary
909 East Brill Street, Phoenix, Arizona

Fred H. Landeen, M.D. Treasurer
2222 North Craycroft, Tucson, Arizona

Walter Brazie, M.D. Speaker of the House
P.O. Box 631, Kingman, Arizona

Roland F. Schoen, M.D. Editor-in-Chief
1023 E. Florence Blvd., Casa Grande, Arizona

Dermont W. Melick, M.D. Delegate to AMA
909 East Brill Street, Phoenix, Arizona

William B. Steen, M.D. Delegate to AMA
116 North Tucson Blvd., Tucson, Arizona

Daniel T. Cloud, M.D. Alternate Delegate to AMA
2021 North Central Avenue, Phoenix, Arizona

Philip G. Derickson, M.D. Alternate Delegate to AMA
744 N. Country Club Rd., Tucson, Arizoona

DISTRICT DIRECTORS

Richard O. Flynn, M.D. Central District
2210 S. Mill Ave., Tempe, Arizona

W. Shaw McDaniel, M.D. Central District
461 W. Catalina Dr., Phoenix, Arizona

Robert A. Price, M.D. Central District
3602 N. 15th Avenue, Phoenix, Arizona

Noel G. Smith, M.D. Central District
3614 N. 15th Avenue, Phoenix, Arizona

Jack E. Brooks, M.D. Central District
2021 North Central Avenue, Phoenix, Arizona

Harry S. Beckwith, M.D. Northeastern District
East 2nd & Colorado Avenue, Winslow, Arizona

Hugh E. Dierker, M.D. Northwestern District
505 N. Beaver St., Flagstaff, Arizona

Deward G. Moody, M.D. Southeastern District
Stage Building, Nogales, Arizona

Warren D. Eddy, Jr., M.D. Southern District
601 North Wilmot Rd., Tucson, Arizona

Richard L. Dexter, M.D. Southern District
116 N. Tucson Blvd., Tucson, Arizona

Hermann S. Rhu, Jr., M.D. Southern District
5th Street & Alvernon Way, Tucson, Arizona

Howard W. Finke, M.D. Southwestern District
Magma Hospital, Superior, Arizona

COMMITTEES — 1966-67

NOTE: The President, President-elect and Secretary are ex-officio members of all Committees unless otherwise specified.

ARTICLES OF INCORPORATION & BY-LAWS COMMITTEE: Walter Brazie, M.D., Chairman (Kingman)

BENEVOLENT AND LOAN FUND COMMITTEE: Daniel T. Cloud, M.D., Chairman (Phoenix)

CENTRAL OFFICE ADVISORY COMMITTEE: Charles E. Henderson, M.D., Chairman (Phoenix)

GRIEVANCE COMMITTEE:

HISTORY AND OBITUARIES COMMITTEE: Robert S. Flinn, M.D., Chairman (Phoenix)

INDUSTRIAL RELATIONS COMMITTEE: Morris E. Stern, M.D., Chairman (Phoenix)

LEGISLATIVE COMMITTEE: Carlos S. Craig, M.D., Chairman (Phoenix).

MEDICAL ECONOMICS COMMITTEE: Ian M. Chesser, M.D., Chairman (Tucson)

PROCUREMENT AND ASSIGNMENT COMMITTEE: Joseph M. Greer, M.D., Chairman (Phoenix).

PROFESSIONAL COMMITTEE: William G. Payne, M.D., Chairman (Tempe)

PUBLIC RELATIONS COMMITTEE: Arthur V. Dudley, Jr., M.D., Chairman (Tucson)

PUBLISHING COMMITTEE: Roland F. Schoen, M.D., Chairman (Casa Grande)

SCIENTIFIC ASSEMBLY COMMITTEE: Edward Sattenspiel, M.D., Chairman (Phoenix)

COUNTY MEDICAL SOCIETY OFFICERS, 1966

APACHE: W. Duncan Spining, M.D., President, Sage Memorial Hospital, Ganado; Ellis W. List, Jr., M.D., Secretary, McNary Hospital, McNary.

COCHISE: Raymond Grossman, M.D., President, Drawer 1059, Douglas 85607; Jorge Gaytan, M.D., Secretary, Drawer S. Douglas.

COCONINO: Hugh E. Dierker, M.D., President, 505 N. Beaver, Street, Flagstaff; R. T. McDonald, M.D., Secretary, 713 N. Beaver Street, Flagstaff.

GILA: David B. Gilhert, M.D., President, Physicians & Surgeons Clinic, Payson; Alford D. Musgrave, Jr., M.D., Secretary, 703 Ash Street, Globe.

GRAHAM: John H. Walker, M.D., President, 702 8th Avenue, Safford.

GREENLEE: Gerhard L. Ihm, M.D., President, Phelps Dodge Hospital, Morenci; James W. Gilhert, M.D., Secretary, P. O. Box 1537, Clifton.

MARICOPA: Ray Fife, M.D., President, 2620 N. 3rd Street, Phoenix; Charles H. Finney, M.D., Secretary, 555 W. Catalina Dr., Phoenix.
(Society Office — 2025 North Central Avenue, Phoenix)

MOHAVE: John G. Lingenfelter, M.D., President, 412 E. Oak Street, Kingman; John J. Standifer, M.D., Secretary, 412 E. Oak Street, Kingman.

NAVAJO: Claude H. Peterson, M.D., President, 1500 Williamson Ave., Winslow; Leo L. Lewis, M.D., Secretary, Santa Fe Medical Offices, P. O. Box 673, Winslow.

PIMA: Darwin W. Neuhauer, M.D., President, 720 N. Country Club Rd., Tucson; Seymour L. Shapiro, M.D., Secretary, Bldg. 24, Medical Square, 1601 N. Tucson Blvd., Tucson.
(Society Office — 2555 East Adams Street, Tucson)

SANTA CRUZ: Charles S. Smith, M.D., Secretary, Gebler Building, Nogales.

YAVAPAI: Dennis R. Semkin, M.D., President, 533 W. Gurley Street, Prescott; William R. Shepard, M.D., Secretary, 1003 Division Street, Prescott.

YUMA: James Volpe, Jr., M.D., President, P. O. Box 1151, Harold N. Gordon, M.D., Secretary, 1832 8th Avenue, Yuma.
(Society Address — P. O. Box 4370, Kofa Suhstation, Yuma)

WOMAN'S AUXILIARY TO THE ARIZONA MEDICAL ASSOCIATION — 1966-67

President Mrs. Rohert G. Delph (Grace)
2019 North Crescent Drive, Flagstaff, Arizona

President-Elect Mrs. Elvie B. Jolley (Mila)
Box 919, Bishee, Arizona

1st Vice President Mrs. Richard Hardenhrook (Kaaren)
316 Grove Avenue, Prescott, Arizona

2nd Vice President Mrs. Charles Matheus (Marilyn)
2148 East 25th Street, Yuma, Arizona

Secretary Mrs. Richard Timmons (Evelyn)
5302 N. 69th Place, Scottsdale, Arizona

Treasurer Mrs. James Parsons (Carolyn)
5251 E. Hawthorne Pl., Tucson, Arizona

Director Mrs. James B. Tucker (LaVerne)
700 East 10th Street, Casa Grande

SOCIEDAD MEDICA DE ESTADOS UNIDOS DE NORTE AMERICA Y MEXICO
MEDICAL SOCIETY OF THE UNITED STATES & MEXICO

President Dr. L. Maxwell Lockie
130 Morris Avenue, Buffalo 14, New York

President-Elect Dr. Alfonso Topete Duran
Edificio Professional, Juarez y Pavo, Guadalajara, Jalisco, Mexico

Vice President Dr. James Nauman
1603 North Tucson Boulevard, Tucson, Arizona

Secretary for the United States Dr. Earl J. Baker
550 West Thomas Road, Phoenix, Arizona

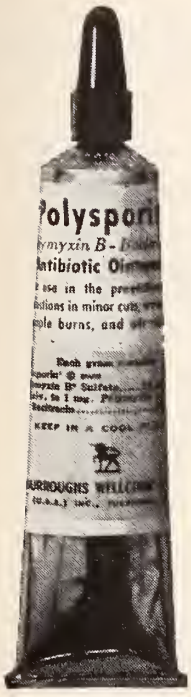
Secretary for Mexico Dr. Felix Michel
Pavo 112, Guadalajara, Jalisco, Mexico

Treasurer for the United States Dr. Lucy A. Vernetti
333 West Thomas Road, Suite 207, Phoenix, Arizona

Treasurer for Mexico Dr. Eduardo Gonzalez Murguia
Juarez 673, Guadalajara, Jalisco, Mexico

Executive Secretary for Mexico Mr. Alfredo E. Patron
Mazatlan, Sinaloa, Mexico

in treating topical infections, no need to sensitize the patient



USE 'POLYSPORIN'® brand POLYMYXIN B-BACITRACIN ANTIBIOTIC OINTMENT

broad-spectrum antibiotic therapy with minimum risk of sensitization

Caution: As with other antibiotic products, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs. **Contraindication:** This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.
Supplied: In ½ oz. and 1 oz. tubes
Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

MEDICINE IN TERRITORIAL ARIZONA

by

Frances E. Quebbeman

LIMITED NUMBER OF AUTOGRAPHED COPIES NOW AVAILABLE

$7.50 each

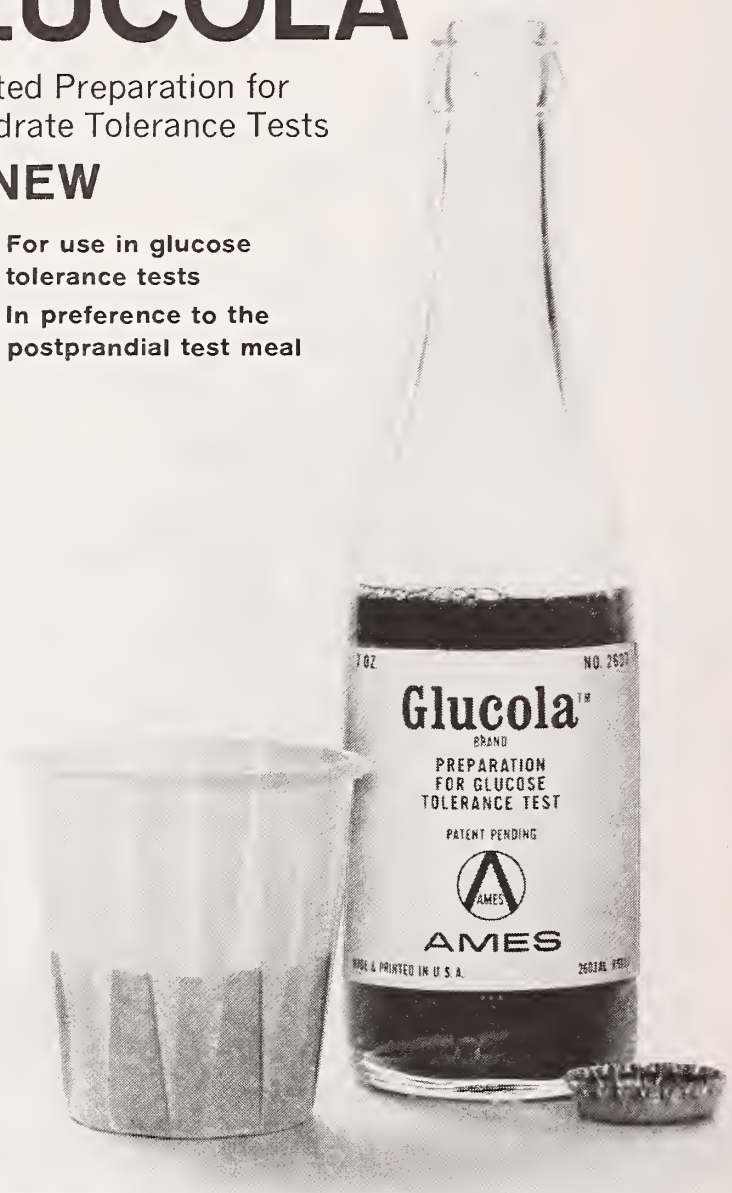
Arizona Medical Association
4601 N. Scottsdale Road — Suite 201
Scottsdale, Arizona

GLUCOLA™

Carbonated Preparation for
Carbohydrate Tolerance Tests

NEW

- **For use in glucose tolerance tests**
- **In preference to the postprandial test meal**



A NEW SOLUTION FOR AN OLD PROBLEM

Ready to use • Pleasant tasting cola flavor • Well tolerated

A 7-ounce bottle of GLUCOLA provides a liquid oral loading dose equivalent to 75 Gm. of glucose* for carbohydrate tolerance testing. GLUCOLA avoids the nausea that frequently results from lingering sweet laboratory preparations, and the occasional emesis that necessitates rescheduling the test. With GLUCOLA, no time is lost weighing and mixing glucose "cocktails"—only a bottle opener is needed.

753(R2)64

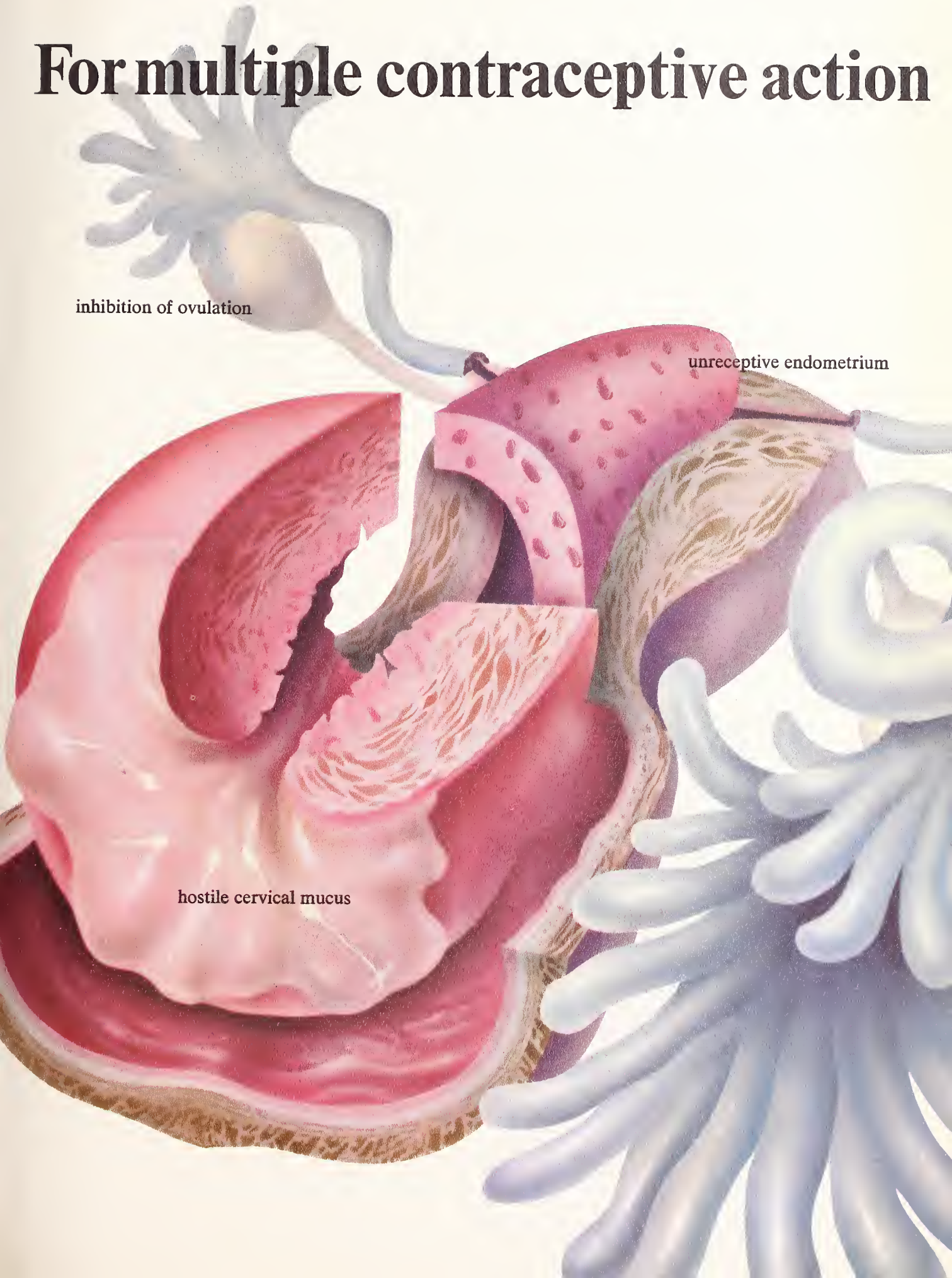
*The rapidly hydrolyzable saccharides in this formulation assure optimum absorption and glucose levels comparable to those obtained with a 100 Gm. loading dose.

Available through your regular supplier:
cartons of 12 7-oz bottles (6 bottles per pack, 2 packs per carton).

Ames Company, Inc.
Elkhart, Indiana

AMES

For multiple contraceptive action



Norinyl® tablets

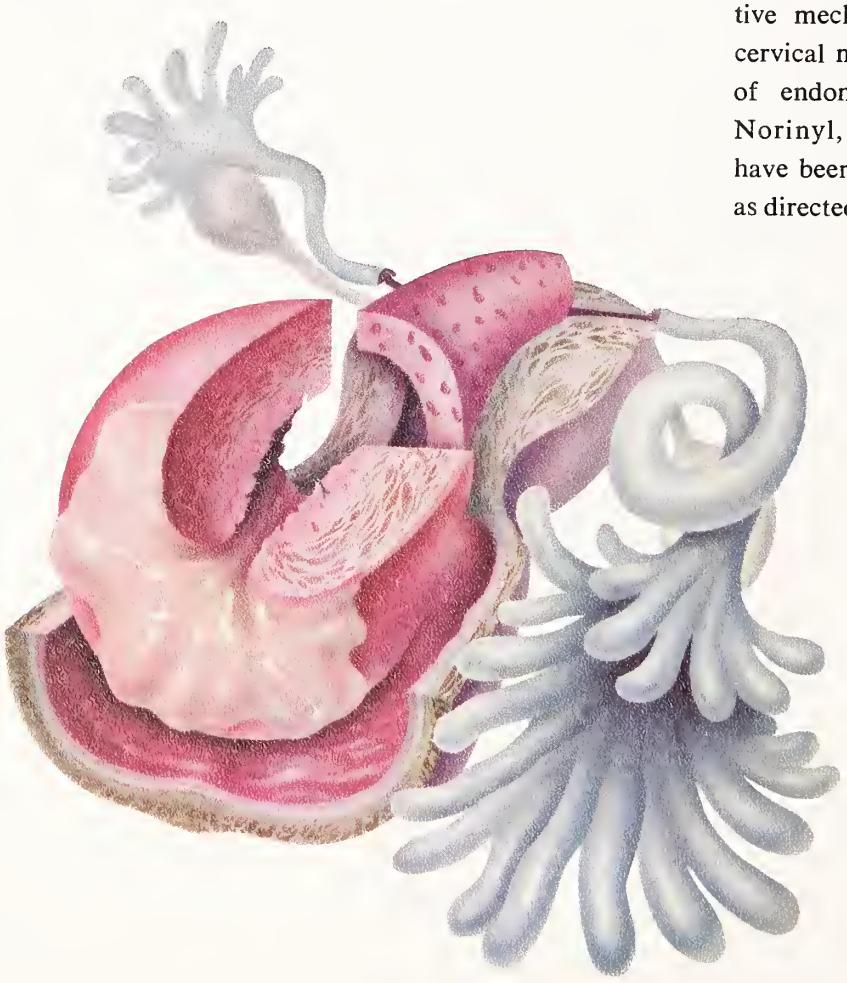
(norethindrone 2 mg. ± mestranol 0.1 mg.)

multiple action that has produced a record of unexcelled effectiveness

inhibition of ovulation by means of 2 time-proved hormonal agents

production of a cervical mucus hostile to sperm motility and vitality

creation of an endometrium unreceptive to egg implantation



no unplanned pregnancies

Norinyl provides multiple action for maximum assurance of success. It does not depend on ovulation inhibition alone for contraceptive effectiveness. The mechanism of action of combined hormonal therapy results in ovulation inhibition reinforced by other protective mechanisms, including a hostile cervical mucus[1-13] and an acceleration of endometrial changes.[1-3,7-16] With Norinyl, no unplanned pregnancies have been reported to date when used as directed.

plus important supportive benefits that help her through those critical early months of oral contraception

low incidence of side effects

Low incidence of BTB and spotting, nausea and amenorrhea tends to minimize side effect problems and increases patient cooperation.

no confusion about dosage

An unbreakable "confusionproof" package makes it easy to adhere to prescribed dosage schedule: individually sealed tablets numbered from 1 through 20 *plus* monthly calendar record enables patient to double-check dosage intake by day and corresponding tablet number.



Contraindications: Thrombophlebitis or pulmonary embolism (current or past). Existing evidence does not support a causal relationship between use of Norinyl and development of thromboembolism. While a study which was conducted does not resolve definitively the possible etiologic relationship between progestational agents and intravascular clotting, it tends to confirm the findings of the Ad Hoc Advisory Committee appointed by the Food and Drug Administration to review this possibility. Cardiac, renal or hepatic dysfunction. Carcinoma of the breast or genital tract. Patients with a history of psychic depression should be carefully studied and the drug discontinued if depression recurs to marked degree. Patients with a history of cerebral vascular accident.

Warning: Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions, medication should be withdrawn.

Precautions: By May 1963, experience with norethindrone 2 mg.—mestranol 0.1 mg. had extended over 24 months. Through miscalculation, omission or error in taking the recommended dosage of Norinyl, pregnancy may result. If regular menses fail to appear and treatment schedule has not been adhered to, or if patient misses two menstrual periods, possibility of pregnancy should be resolved before resuming Norinyl. If pregnancy is established, Norinyl should be discontinued during period of gestation since virilization of the female fetus has been reported with oral use of progestational agents or estrogen. When lactation is desired, withhold Norinyl until nursing needs are established. Existing uterine fibroids may increase in size. In metabolic or endocrine disorders, careful clinical preevaluation is indicated. A few patients without evidence of hyperthyroidism had elevated serum protein-bound iodine levels, which in the light of present knowledge, does not necessarily imply hyperthyroidism. Protein-bound iodine increased following estrogen administration. Bromsulphalein retention has occurred in up to 25% of patients without evidence of hepatic dysfunction. Studies from 24-hour urine collections have shown an increase in aldosterone and 17-ketosteroids and decrease in 17-hydroxycorticoid levels. Thus, Norinyl should be discontinued prior to and during thyroid, liver or adrenal function tests. Because progestational agents may cause fluid retention, conditions such as epilepsy, migraine and asthma require careful observation. Thus far no deleterious effect on pituitary, ovarian or adrenal function has been noted; however, long-range possible effect on these and other organs must await more prolonged observation. Norinyl should be used with caution in patients with bone, renal or any disease involving calcium or phosphorus metabolism.

Side Effects: Intermenstrual bleeding; amenorrhea; symptoms resembling early pregnancy, such as nausea; breast engorgement or enlargement, chloasma and minor degree of fluid retention (if these should occur and patient has not strictly adhered to medication plan, she should be tested for pregnancy); weight gain; subjective complaints such as headache, dizziness, nervousness, irritability; in a few patients libido was increased. In a total of 3,090 patients, 2.2% discontinued medication because of nausea.

NOTE: See sections on contraindications and precautions for possible side effects on other organ systems.

Dosage and Administration: One Norinyl tablet orally for 20 days, commencing on day 5 through and including day 24 of the menstrual cycle. (Day 1 is the first day of menstrual bleeding.)

Availability: Dispensers of 20 and 60 tablets; bottles of 100.

References: 1. Council on Drugs. JAMA 187:664 (Feb. 29) 1964. 2. Bryans, F. E.: Canad Med Ass J 92:287 (Feb. 6) 1965. 3. Goldzieher, J. W.: Med Clin N Amer 48:529 (Mar.) 1964. 4. Cohen, M. R.: Paper presented at Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965. 5. Hammond, D. O.: Ibid. 6. Rice-Wray, E., Goldzieher, J. W., and Aranda-Rosell, A.: Fertil Steril 14:402 (Jul.-Aug.) 1963. 7. Goldzieher, J. W., Moses, L. E., and Ellis, L. T.: JAMA 180:359 (May 5) 1962. 8. Kempers, R. D.: GP 29:88 (Jan.) 1964. 9. Tyler, E. T.: JAMA 187:562 (Feb. 22) 1964. 10. Rudel, H. W., Martinez-Manautou, J., and Maqueo-Topete, M.: Fertil Steril 16:158 (Mar.-Apr.) 1965. 11. Flowers, C. E., Jr.: N Carolina Med J 25:139 (Apr.) 1964. 12. Goldzieher, J. W.: Appl Ther 6:503 (June) 1964. 13. The Control of Fertility. Report adopted by the Committee on Human Reproduction of the American Medical Association. JAMA 194:462 (Oct. 25) 1965. 14. Flowers, C. E., Jr.: JAMA 188:1115 (June 29) 1964. 15. Merritt, R. I.: Appl Ther 6:427 (May) 1964. 16. Newland, D. O.: Paper presented at Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965.

norethindrone—an original steroid from

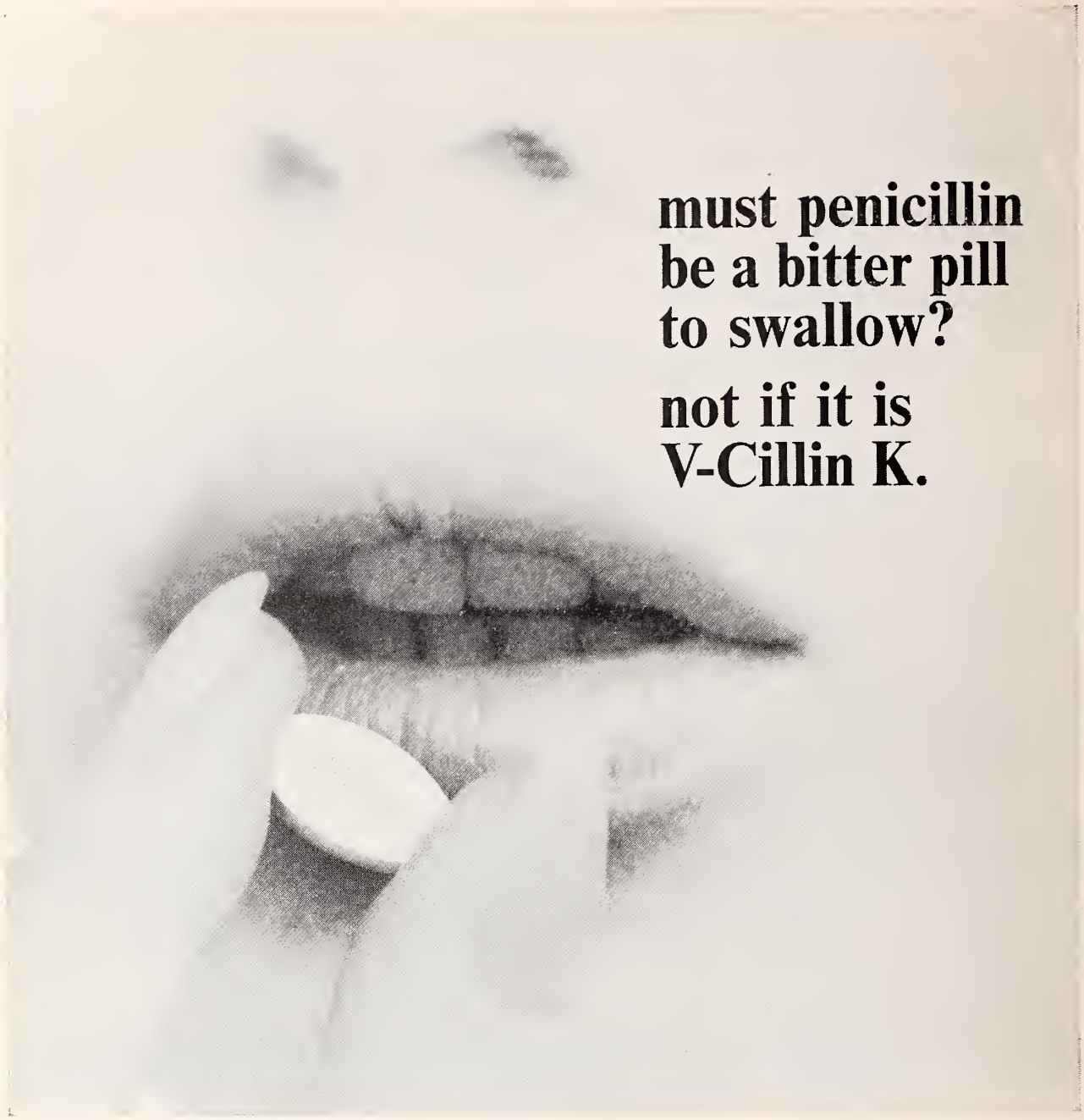
SYNTEX

LABORATORIES INC., PALO ALTO, CALIF.

Norinyl® tablets

(norethindrone 2 mg. c mestranol 0.1 mg.)

for multiple contraceptive action



V-Cillin K now has a unique glossy coating that banishes bitter penicillin taste and makes it easier to swallow. Within six seconds (just long enough for the tablet to get past the taste buds), the coating dissolves and the penicillin is ready for immediate absorption into the bloodstream. The patient still gets all the special benefits of V-Cillin K, including consistent dependability . . . even in the presence of food.

Indications: V-Cillin K is an antibiotic useful in the treatment of infections caused by streptococci, pneumococci, and sensitive strains of staphylococci.

Contraindications and Precautions: Although sensitivity reactions are much less common after oral than after parenteral administration, V-Cillin K should not be administered to patients with a history of allergy to penicillin. As with any antibiotic, observation for overgrowth of nonsusceptible organisms during treatment is important.

Usual Dosage Range: 125 mg. (200,000 units) three times a day to 250 mg. every four hours.

Supplied: Tablets V-Cillin K, 125 or 250 mg.; also, V-Cillin K, Pediatric, 125 mg. per 5-cc. teaspoonful, in 40, 80, and 150-cc.-size packages.

V-Cillin K® **Six-Second Barrier to Bitterness**

Potassium Phenoxymethyl Penicillin

600802

Additional information available to physicians upon request. Eli Lilly and Company, Indianapolis, Indiana 46206.

Lilly

Massive Pulmonary Embolism: Diagnosis and Treatment

by

Lee B. Brown, M.D.
Robert Diserens, M.D.
Marian Molthan, M.D.
Arthur R. Nelson, M.D.
Daniel T. Cloud, M.D.
Wallace A. Reed, M.D.
Howard Kravetz, M.D.

Salvaging patients with massive pulmonary embolism should no longer be a rare accomplishment in institutions capable of carrying out open heart surgery. Pulmonary embolectomy can be performed with relative ease using cardiopulmonary bypass and readily available laboratory studies. Recognizing that one is dealing with a moribund patient the diagnosis and treatment must be prompt.

INTRODUCTION

PULMONARY embolism is the chief and only life-threatening complication of thrombophlebitis with the rare exception of sepsis. The seriousness of pulmonary embolism is in all likelihood largely dependent upon the size of the embolus or emboli and the degree of obstruction of the pulmonary artery and the pulmonary vascular circulation. If the degree of obstruction is great, equivalent to or perhaps somewhat more than the obstruction of one pulmonary artery or 50 per cent of the pulmonary vascular bed, there results outflow obstruction of the right ventricle with eventual failure of the right ventricle, low pulmonary blood flow with impaired ventilation-perfusion relationships, inflow failure of the left ventricle with resulting systemic hypotension or shock, and an hypoxic and poorly perfused heart and body mass.[21, 22, 38, 41] It is these physiologic events which define "massive" pulmonary embolism.

Phoenix, Arizona.

It is apparent that several gradations of pulmonary embolism can occur from slight to moderately severe. Obstruction of the pulmonary vascular bed is usually confined to lobar, segmental or subsegmental vessels, involving less than 50 per cent of the pulmonary vascular bed. Those grave physiologic events in massive pulmonary embolism do not necessarily occur; or if so, they do not persist. [21, 22, 34]

Most instances of pulmonary embolism are not massive but of a lesser variety. Vigorous anticoagulation and general medical support may suffice. If the initial embolus seems moderately severe but tolerable, or if pulmonary embolism is recurrent, ligation of the vena cava or one of its variants is indicated. The majority of patients will survive this form of pulmonary embolism with the indicated treatment.

Massive pulmonary embolism is quite another matter. Death frequently results immediately or within an hour or two of the catastrophe. A significant number of patients, perhaps half of the

patients with massive pulmonary embolism, survive the immediate catastrophe. [4, 16, 21, 22] It is the diagnosis and treatment of a massive pulmonary embolism with specific reference to pulmonary embolectomy which occasions this report. Without pulmonary embolectomy, the vast majority of these patients will die within twenty-four to thirty-six hours of the onset of massive pulmonary embolism.

CASE REPORT

Mrs. E. P., a 67 year old obese white female, was admitted to the Emergency Room of the Good Samaritan Hospital late in the evening of August 25, 1965 with a complaint of shortness of breath. She had been in good health until eight days prior to admission when she developed thrombophlebitis of the right lower extremity. Treatment consisted of bed rest and heat to the involved extremity. Four days later, while walking from the bathroom, she noted the sudden onset of severe substernal pressure pain which shortly abated but was accompanied by shortness of breath which was progressively severe. There was a slight nonproductive cough but no hemoptysis occurred. Her dyspnea progressed to the point that she could not complete a short sentence without having to gasp for breath. In this condition, she presented herself for evaluation in the Emergency Room.

Her past history indicated long-standing obesity, asthma prior to moving to Arizona with no recent difficulty, and the removal of a cyst from the left breast twenty years previously.

Physical examination revealed an obese white female in obvious respiratory distress with mild cyanosis. Her temperature was 98.2°, blood pressure 150/90, pulse 120 and regular, the respirations 40. She weighed 270 pounds and was 64 inches tall. There was cyanosis of the nail beds and nucous membranes. The neck veins were distended at 30° elevation. There were a few scattered inspiratory rales at both lung bases, the heart was not enlarged, no murmurs were heard, and sinus tachycardia was present. The second

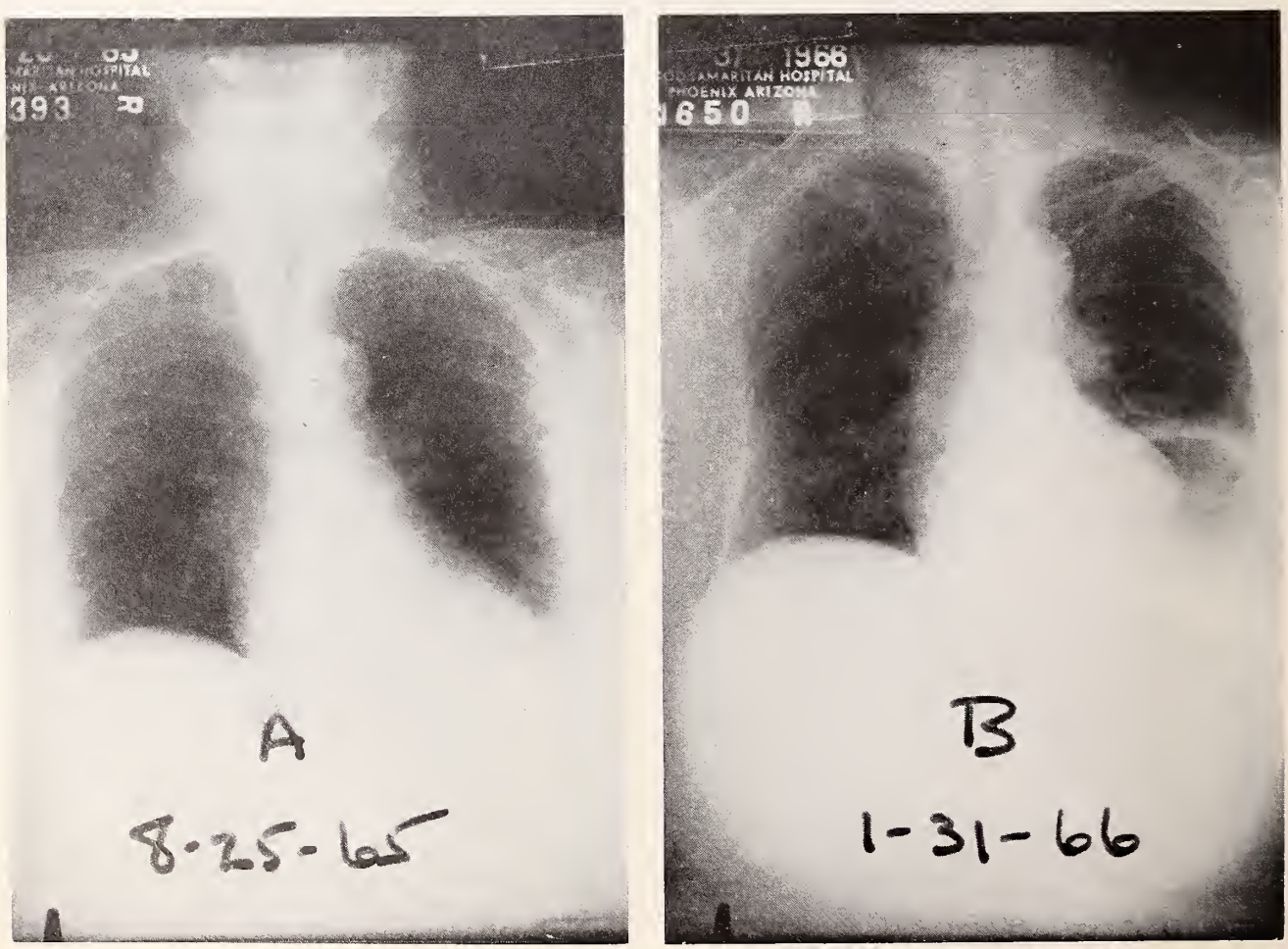


Figure 1

Figure 1A illustrates the preoperative chest film and Figure 1B the postoperative film. The relatively normal preoperative film is notable. The postoperative film is essentially normal some five months following operation with the exception of the elevated left diaphragm.

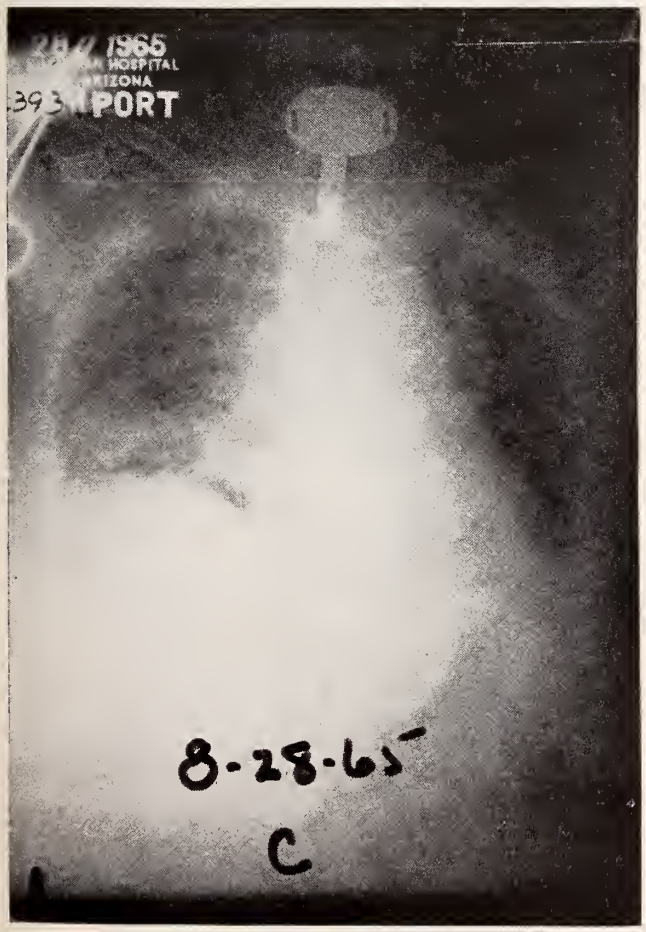
heart sound at the left second intercostal space was accentuated but there was no split. There was no impulse of an enlarged pulmonary artery or right ventricular hypertrophy, and a gallop rhythm was not present. A hepatojugular reflex was demonstrable, but the liver edge could not definitely be palpated. Tenderness was noted along the greater saphenous vein on the right side, but there was no edema, no calf tenderness, and Homan's sign was absent.

Admission chest X-ray was within normal limits and the lung fields were entirely clear. There was no evidence of a radiolucency to indicate decreased vascularity of the lungs (Fig. 1). Electrocardiogram showed sinus tachycardia with L.A.D. to -40° and non-specific T wave changes. Hemoglobin was 15.2 gms., hematocrit 44%, and white count 7,000 with 62 bands, 31 polys, and 7 monocytes. Urinalysis was normal. SGOT and LDH were both slightly elevated to 74 and 640 units respectively. Arterial blood gas studies were obtained (Table I). The low pO_2, PCO_2 and pH of 7.52 were consistent with desaturation, hyperventilation, and respiratory alkalosis, all consistent with pulmonary embolism.

Table I
Blood Gas Analysis

DATE	pH	PO_2	PCO_2	O_2 SAT. in %	COMMENTS
8/26/65	7.52	38	18	88	Breathing Air
	7.51	46	22	91	Breathing O_2
	7.33	59	30	91	Surgery with O_2
8/27/65	7.48	40		84	Post-op without O_2
	7.51	44	28		with O_2
	7.51	38	31	81	without O_2
	7.51	61	25	94	with O_2
	7.49	83	28	98	with O_2
8/28/65	7.46	62	42	93	with O_2
8/30/65	7.48	61	38	95	with O_2
9/16/65	7.49		34	90	Breathing Air
	7.45		36	99	Breathing O_2
10/ 1/65	7.46		31	92	Breathing Air

Cardiac catheterization and angiocardiography were performed. Right atrial pressure was 20 mm. Hg. mean, right ventricle 70/20 mm. Hg. The pulmonary artery could not be entered with a catheter. A right atrial injection was made and films taken with the Sanchez-Perez changer (Fig. 2A). Near complete occlusion of the right and left pulmonary arteries was noted.



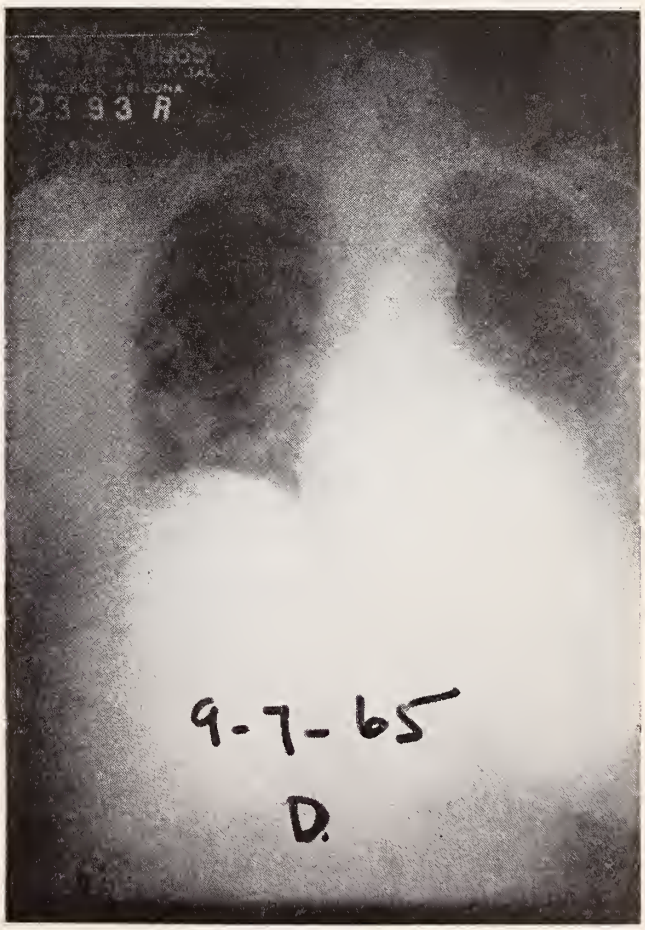


Figure 1C and Figure 1D show an infiltrate in the right lower lobe 3 and 12 days post-operatively respectively. This finding was interpreted as evidence of pulmonary infarction; but could of course represent atelectasis and pneumonitis.

The diagnosis of massive pulmonary embolism was confirmed. In view of the severity and persistence of clinical findings, the degree of arterial desaturation, and extent of obstruction of the pulmonary arteries, embolectomy was elected. The patient was rapidly digitalized and heparinized. Preparations were made for operation.

Twenty-two hours after admission, general anesthesia was induced with thiamytal (surital) sodium. Orotracheal intubation was performed with succinylcholine chloride (anectine) relaxation. Anesthesia was maintained with nitrous oxide-oxygen and d-Tubo curarine chloride for relaxation. Body temperature was 34° C. during bypass. A sternum splitting incision was used and the customary cannulations of the femoral artery, superior and inferior vena cava were made for bypass. A standard rotating disc oxygenator was utilized with two-thirds bank blood and one-third 5% glucose in water as the perfusate. Prior to the initiation of bypass, the inferior vena cava was exposed through a right flank muscle splitting incision and a Miles clip applied just below the renal veins. No thrombus was palpable. Partial then total bypass was initiated and the pulmonary artery opened widely. Thrombus was extracted with forceps totally 15 grams, the largest fragment measuring 5 x 3 cm. The degree of obstruction was astounding. The only partially patent pulmonary arteries grossly observed were the segmental branches to the left upper lobe and the apical-anterior branch of the right upper lobe. The lungs were rather vigorously inflated and the pumonary arteries briskly irrigated with saline to remove any remaining fragments of thrombus. Good backflow was apparent from both the right and left pulmonary arteries. The incision in the pulmonary artery was closed and partial bypass effected. Perfusion was quite satisfactory and the heart behaved well with vigorous contractions. Bypass was discontinued and decannulation carried out. Closure of the various wounds was made. The condition of the patient at the conclusion of the procedure was satisfactory. Bypass time was 15 minutes and the entire operating time was 2 hours and 30 minutes.

Her postoperative course was stormy. Tracheostomy was performed the morning following operation for retained respiratory secretions. She was febrile for many days. Infarction and atelectasis of the right lower lobe were believed to have occurred. Arterial insufficiency of the right lower extremity was observed, though not severe, secondary to femoral cannulation. Digitalis intoxication developed on one occasion. Her general condition improved and considerable clinical benefit was noted shortly following the operation.

Postoperative blood gases were determined on several occasions (Table 1). The still abnormal blood gases, the X-ray evidence to support the development of lung infarction, and her general tardy clinical improvement all pointed to incomplete thrombectomy.

Right heart catheterization and angiocardiography were repeated on the 32nd postoperative day. Right ventricular pressure was 48/22 mm. Hg. and the right atrial mean pressure was 15 mm. Hg. Injection was again made in the right atrium and films taken with the rapid changer. Considerable improvement in the pulmonary arterial vascularization was noted although the left lower lobe showed restricted filling (Fig. 2B).

She was discharged ambulatory on the 36th postoperative day. Anticoagulation with Coumadin has been continued to the present time. The patient was seen in February of 1966 and her continued clinical improvement observed. A repeat right heart catheterization and selective pulmonary arteriography was carried out which demonstrated fair improvement in the vascularization of the lungs, particularly the left lower lobe (Fig. 2C).

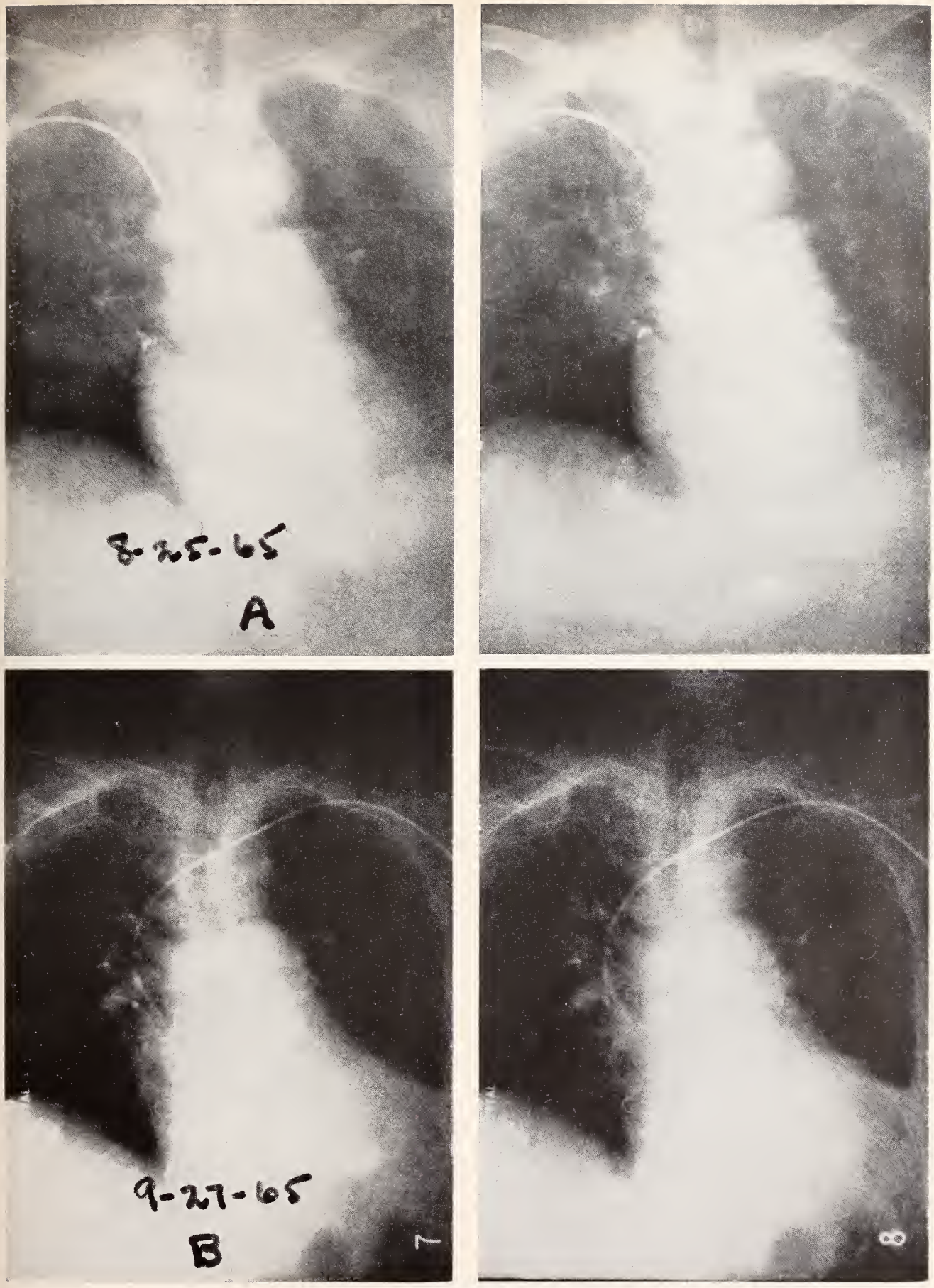
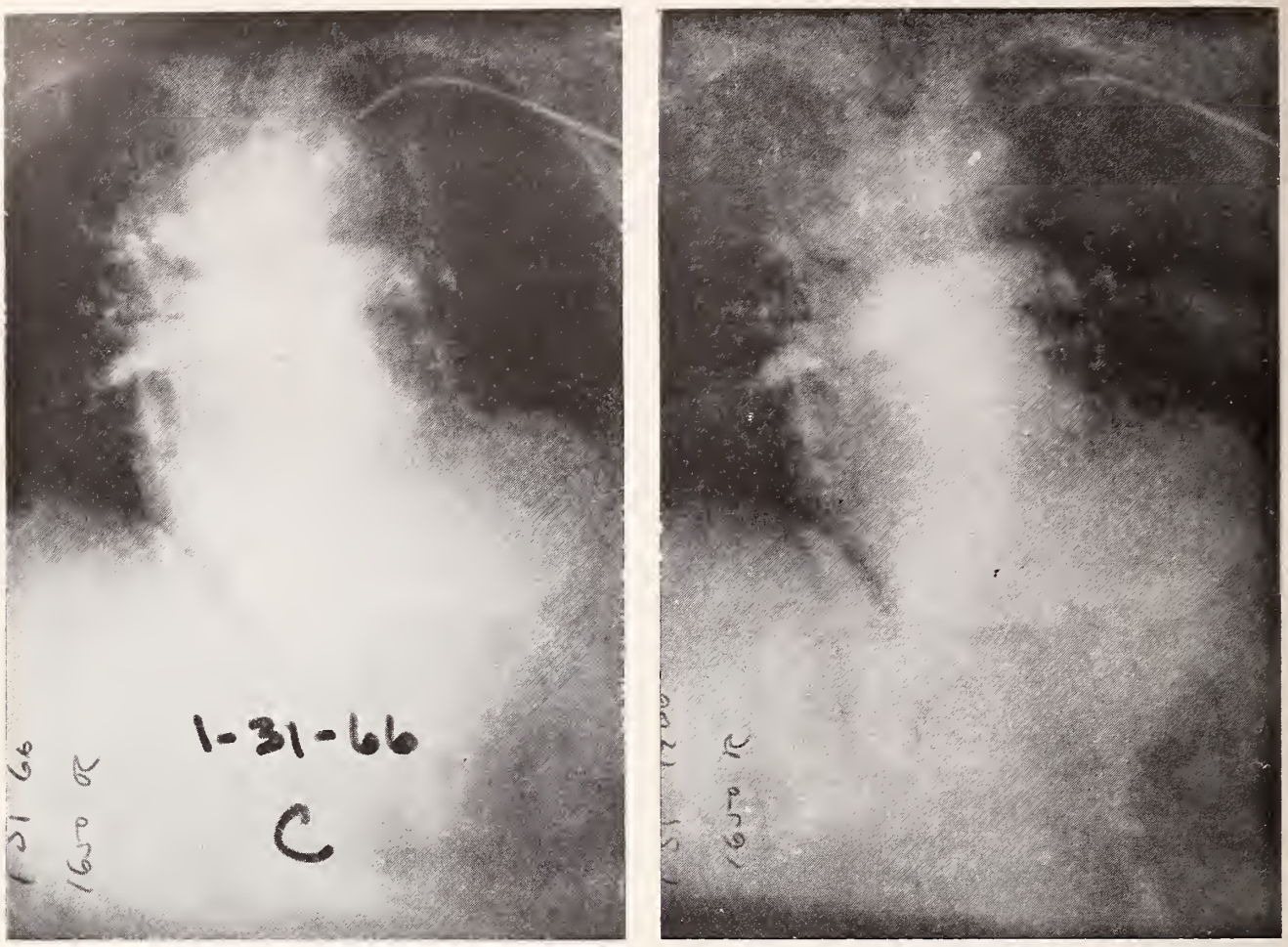


Figure 2

A is the preoperative arteriogram, B approximately 1 month post-operative, and C approximately 5 months post-operative. Two "cuts" are shown from each series of arteriograms. The preoperative arteriogram shows complete occlusion of the intermediate artery and the left lower lobe artery. Vascularization of the right upper lobe and the left upper lobe are noted. Films 1 month post-operative show renewed vascularization of the right middle and lower lobe and the left lower lobe to a lesser degree. Atelectasis of a portion of the left lower lobe obscures the arteriogram on the left to some degree. Films 5 months post-operative show still further improvement in the vascularization of the left lower lobe with much better definition of the left lower lobe vessel. ("C" on following page)



Comment: The clinical findings suggested the presence of a severe degree of obstruction of the pulmonary artery. Right heart failure was present as indicated by the elevation of the right atrial pressure reflected in the distended jugular veins and the presence of a hepatojugular reflex. In the absence of significant pulmonary disease, tachypnea and cyanosis suggested a diffusion problem. Thrombophlebitis was minimal and generally unimpressive. The chest X-ray was striking in the sense of abnormalities being absent, and its chief value was to exclude primary pulmonary problems to explain her serious condition. The electrocardiogram was not diagnostic of pulmonary embolism or myocardial infarction. The slightly elevated SGOT and LDH again supported the view that massive myocardial infarction was not present. Cardiac catheterization confirmed the presence of right ventricular failure and arterial desaturation was confirmed by blood gas analysis. Pulmonary arteriography was decisive in indicating the presence and the extent of massive pulmonary embolism. Pulmonary embolectomy was accomplished without difficulty even though the patient was gravely ill. Partial occlusion or partition of the vena cava was performed to insure against the recurrence of pulmonary embolism. The patient's postoperative course suggested that thrombectomy was incomplete and this was confirmed by postoperative pulmonary arteriogram. Pulmonary arteriograms taken some five months following the operative procedure indicated continued improvement in vascularization of the lung which supports the view that spontaneous lysis of the thrombi does occur. The present condition of the patient is gratifying. She has no residual disability related to the pulmonary embolism.

DISCUSSION
VENOUS THROMBOSIS IN PULMONARY EMBOLISM

Extensive reference is made to the problem of venous thrombosis and pulmonary embolism in the literature. The incidence of the disease, pathologic findings, physiologic aspects, clinical findings, treatment with anticoagulants and venous ligation, results of treatment and prognosis are extensively documented.[4, 9, 10, 11, 12, 13, 16, 18, 20,

[21, 22, 34,35] The papers of Matas[29], DeBakey[13], Gorham,[21, 22] and Beall[4] are noteworthy. It is not our purpose to here review this general subject, but to consider those aspects which have bearing upon the diagnosis of the condition, and its treatment by embolectomy.

PATHOLOGY & PHYSIOLOGY OF PULMONARY EMBOLISM

Autopsy examination indicates that in more than 80 per cent of subjects, the main pulmonary artery, the right or left or both pulmonary arteries are the sites of massive embolization. Fresh thrombus material is usually found extending distal to the embolus into the lesser branches of the pulmonary arteries. Pulmonary infarction is not frequently seen in massive pulmonary embolism. It has been noted that previous emboli *antedating* the massive embolism are found in 40 per cent of patients. The emboli are usually considered to arise in the leg veins, but more recently the iliofemoral veins and the pelvic veins have been given increasing attention as sites of origin of emboli. The cardiac origin of emboli has been emphasized.[16, 21, 22, 34, 41]

There has been considerable discussion concerning the mechanical and reflex factors in the clinical syndrome of pulmonary embolism. Able discussion is given by Gorham,[22] Sabiston and Wagner,[38] Nelson and Smith,[34] and Smith, et al.[41] It has been said that death has resulted from what appears to be minor pulmonary embolism at autopsy.[14] The suggestion follows that profound spasm of the pulmonary vascular bed and perhaps the coronary arteries follows a mechanically minor pulmonary embolus. Documentation of this has been difficult and uncertain, and coexistent conditions not fully accounted for. Nevertheless, a pulmonary embolus which occludes one pulmonary artery has a more profound effect than pneumonectomy, and consequently, though difficult to explain, the possibility of reflex effects cannot be wholly excluded.[22, 41]

Smith, et al[41] have reported very interesting studies based upon detailed examination of autopsy material utilizing postmortem arteriography and arterial cast technics. Their findings indicate that small pulmonary emboli which involve subsegmental arteries are numerous, and may number 30 to 60 emboli per lung. Utilizing arterial volume studies, the pulmonary vascular bed might be reduced to one-third normal as a result of multiple small emboli. The possibility of multiple small emboli producing a mechanical problem is suggested. Pulmonary hypertension in man as a result of recurrent thromboembolism also implicates involvement of subsegmental and smaller pulmonary vessels, as a chronic rather than acute process.[20] Smith et al[41] further discuss the mechanical and reflex factors in pulmonary embolism. In animals, emboli at the arteriolar level, though uncommon, were most likely to produce reflex vasoconstriction; but this was rarely the case when small muscular or subsegmental vessels were involved.

Most authors agree that the mechanical factor is the principal one, and the clinical effect of a pulmonary embolus is proportional to the degree of obstruction of the pulmonary vascular bed, other factors being equal.[21, 22, 34, 38, 41] Outflow obstruction and failure of the right ventricle, low pulmonary blood flow with related diffusion problems, inflow failure of the left ventricle with resulting poor systemic perfusion and hypoxia, are the physiologic events which follow massive pulmonary embolism.

CLINICAL-PATHOLOGIC CORRELATION AND CLASSIFICATION OF PULMONARY EMBOLISM

Attention is directed to the extent and location of pulmonary emboli and certain aspects of the clinical and X-ray findings. In massive pulmonary embolism, the main, right, or left pulmonary arteries or both are usually involved. The physiologic events have already been described. Because of the acuteness of the condition, the likelihood of an early demise, the proximal location of the embolus, lung infarction is not frequently seen. This is true even though thrombus does extend distal to the embolus in the lobar and segmental vessels as determined at operation and autopsy. If survival of more than several hours or perhaps a few days occurs, lung infarction may very well result. If the embolus occludes a lobar or segmental artery, that is a relative peripheral location of the embolus, the patient generally survives, and the evolution of lung infarction is more frequent for both reasons.[16, 21, ,22 34, 38, 41]

Hemoptysis, pleuritic chest pain and X-ray abnormalities, with or without pleural effusion, are closely related to the presence of lung infarction; and therefore they are infrequently noted

in the early course of massive pulmonary embolism, but more frequently seen when the embolus involves lobar, segmental, or subsegmental pulmonary vessels.[16, 21, 22, 34, 38, 41] Even then, hemoptysis occurs in less than 25 per cent of patients.

There are obviously many ways to classify pulmonary embolism, but the following classification (Table 2) is simple and is related to the pathology, physiology and X-ray changes noted in pulmonary embolism in its various forms. Evoy[16] and Gorham[21, 22] discuss the topography of pulmonary embolization.

As in all classifications, there are many variables concerned and there is always a "grey zone" which defies accurate classification. It is obvious that patients will vary in their response to pulmonary embolism quite apart from the degree of obstruction of the pulmonary vascular bed. This variability must concern the integrity of the cardiac and pulmonary apparatus prior to the event of pulmonary embolism. A variety of conditions which impair the function of the heart and lungs are concerned; for example arteriosclerotic heart disease with compromised cardiac reserve, coexistent myocardial infarction, emphysema and pulmonary fibrosis, and previous pulmonary resection.

THE REVERSIBILITY OF PULMONARY EMBOLISM

It has been noted that significant pulmonary emboli have resorbed with restitution of pulmonary blood flow. These observations are reported by Allison[1, 2] and Sautter et al[42] very recently and are based upon serial arteriographic studies and pathologic findings. It follows that such an event may well take place in all degrees of pulmonary embolism. How regularly the phenomenon takes place, to what extent it takes place, how predictable and effective the results may be is still unclear. Such information implies in a way that if the patient can be tided over the immediate consequences of pulmonary embolism, the future course of events will be favorable as a result of spontaneous lysis of embolic and thrombus material.

CLINICAL FINDINGS IN MASSIVE PULMONARY EMBOLISM

Air hunger, cyanosis, cool and clammy skin, profuse diaphoresis, thin rapid pulse in an anxious patient, perhaps with substernal distress, are common clinical findings in massive pulmonary embolism. Elevated venous pressure, hypotension, and hepatomegaly are additional findings. Cough, hemoptysis, and pleuritic chest pain are infrequent findings. Evidence of thrombophlebitis is found in perhaps 25 per cent of the patients or less. Examination of the heart is frequently unrewarding and the lungs are surprisingly normal. Examination of the heart may reveal accentuation of the second pulmonic sound with a split, gallop rhythm, and right ventricular hypertrophy. The absence of abnormal pulmonary findings is important in the exclusion of other conditions involving the lungs. The persistence of the symptoms and findings as well as their severity is of considerable diagnostic importance.[4, 16, 21] McGinn and White[30] were the first to emphasize the syndrome of acute cor pulmonale due to massive pulmonary embolism.

Table II
Classification of Pulmonary Embolism

Classification	Location of Embolus	Clinical Correlation
Class I, minor p.e.	segmental and subsegmental	Pleuritic chest pain, hemoptysis, pulmonary infiltrates with and without effusion, absent to moderate embarrassment of cardiac and pulmonary physiology which tends to be transient when noted.
Class II, moderate to moderately severe p.e.	lobar and segmental (less than 50% p.v. obstruction)	
Class III, massive or severe p.e.	main pumonary artery, right, left or both pulmonary arteries, or multilobar pulmonary arteries (more than 50% p.v. obstruction)	Embarrassment of cardiac and pulmonary physiology predominates. Pleuritic chest pain, hemoptysis, and X-ray changes of infarction are uncommon.

p.e.—pulmonary embolus
p.v.—pulmonary vascular

CLINICAL DIFFERENTIATION OF MASSIVE AND LESSER PULMONARY EMBOLISM

A similar train of symptoms may be noted in lesser degrees of pulmonary embolism, but the findings are usually less severe and more important still are likely to be transient. Some degree of dyspnea, sweatiness, tachycardia, may be noted but tend to improve rapidly. Cough, hemoptysis, pleuritic chest pain, localized pulmonary abnormalities and abnormal chest X-ray findings are more frequently yet inconsistently noted and suggest a more peripheral locus of the embolization and lung infarction. Elevated venous pressure, hypotension, etc., are much less commonly seen, and indicate the absence of a severe degree of outflow obstruction of the right ventricle. The findings of thrombophlebitis are likewise lacking in more than three-quarters of the patients.[4, 16, 21]

STANDARD CHEST RADIOGRAPHY & ELECTROCARDIOGRAPHY

It is very common that the standard chest film is normal in massive pulmonary embolism. No abnormalities of the lung or the cardiac shadow may be seen. Westermark[47] has described radiolucency to indicate devascularization of the lung. A variety of nondescript infiltrative pulmonary lesions may be seen when the embolus involves lobar and segmental vessels and pleural effusion may or may not be seen.[4, 21]

The electrocardiogram may show peaked P waves, right ventricular strain, right bundle branch block, right axis deviation, and changes to suggest myocardial ischemia. Beall[4] has tabulated the electrocardiographic findings. The existence of electrocardiographic abnormalities prior to the event of embolization may obscure the significance of electrocardiographic findings in pulmonary embolism.[4, 21]

ANGIOCARDIOGRAPHY & RADIOISOTOPE PULMONARY SCANNNING

The diagnosis of massive pulmonary embolism must be verified by anatomic evidence of pulmonary artery obstruction when surgical intervention is considered. Not only is diagnostic confirmation required, but the extent of the obstruction of the pulmonary artery may effect the decision for the need for surgery. The most readily available and reliable means of doing this is by angiocardiography. The procedure can readily be done under local anesthesia and is usually well tolerated by the very ill patient.[39]

The value of radioisotope scanning is reported particularly by Sabiston and Wagner.[38, 46] The technical aspects of the procedure are less generally familiar at the moment and the possibility of misinterpretation is more likely. The procedure would seem to have real merit, likely be even better tolerated than angiocardiography by a sick patient, and serial determinations would be more practical. We have no experience with this procedure.

OTHER DIAGNOSTIC AIDS

Pulmonary function studies and arterial blood gases have limited value in the diagnosis of pulmonary embolism. A low pO_2, low or elevated pCO_2, acidosis or alkalosis can be found. Robin et al[36] reported the gradient between alveolar pCO_2 and arterial pCO_2. Significant pulmonary embolism results in an adequately ventilated but poorly perused lung; therefore the alveolar pCO_2 should be lower than the arterial pCO_2. A gradient of more than 7 mm. of Hg. in the two determinations favors the diagnosis of pulmonary embolism. Obviously other pulmonary conditions could mimic these changes, in particular emphysema. No conclusions could necessarily be drawn as to the location or the extent of pulmonary embolism. The role of bronchial artery circulation in Co2 exchange should be noted.[24] Finally, arteriographic findings are sufficiently conclusive that there is no need for the information obtained by pulmonary function studies which are in general inconclusive.

DIFFERENTIAL DIAGNOSIS OF PULMONARY EMBOLISM

Gorham[21] and Beal[4] have reviewed the various conditions which must be distinguished from pulmonary embolism. Myocardial infarction, congestive heart failure with pulmonary edema, lobar pneumonia, acute pericardial conditions with cardiac tamponade, dissecting aneurysm of the aorta, and an acute upper abdominal catastrophe bear mention. The general physical examination with particular reference to the heart and lungs may serve to clarify the diagnosis. Thus lobar pneumonia, congestive heart failure and pulmonary edema, cardiac tamponade, and acute upper abdominal conditions may be identified. Particular mention should be made of the frequent negative lung findings in pulmonary embolism in this differentiation. The chest film

may be of value in the evaluation of acute pulmonary conditions, cardiac and pericardial abnormalities, and dissecting aneurysm of the aorta. The electrocardiogram may be very helpful in the exclusion of myocardial infarction and acute pericardial condition. Serum enzyme studies may be useful but are usually inconclusive.

SUMMARY OF DIAGNOSTIC CRITERIA OF MASSIVE PULMONARY EMBOLISM

The clinical findings have been detailed and these generally indicate a serious degree of obstruction of the pulmonary artery with the resulting embarrassment of cardiac and pulmonary function, such that death seems imminent, or likely. There is failure of significant spontaneous improvement. Chest films, electrocardiogram, arterial blood gases and other diagnostic data may be helpful but not conclusive in the diagnosis of pulmonary embolism. Their principal value is the exclusion of conditions which may be confused with pulmonary embolism. Right angiocardiogram and pulmonary arteriography are indispensible in confirmation of pulmonary embolism; and furthermore the degree of obstruction of the pulmonary artery so demonstrated may be helpful in the decision for or against embolectomy.

THERAPEUTIC APPROACH TO PULMONARY EMBOLISM

Given the patient with pulmonary embolism, confirmed by a pulmonary arteriogram, a well considered plan of treatment must be decided upon. The patient should be heparinized and supportive medical treatment instituted as necessary. Clinical observation of the course of events may be extremely helpful. The peristence of those findings which indicate a serious degree of obstruction of the pulmonary artery, elevation of the venous pressure, hepatomegaly, cyanosis and hypotension urge prompt embolectomy and caval interruption. This would be supported by the arteriographic evidence of apulmonary vascular obstruction equivalent to or in excess of an entire pulmonary artery.

If the patient improves rapidly and particularly if pulmonary arteriography demonstrates obstruction of less than the equivalent of one pulmonary artery—lobar, segmental, or subsegmental—a conservative course of action may be properly elected.

Whenever pulmonary embolism has been sufficient to cause temporary embarrassment of cardiac and pulmonary function, and certainly with recurrent pulmonary emboli, ligation or partition of the vena cava should be performed at an early date.[11, 12, 15, 35]

Minor degrees of pulmonary embolism characterized by pleuritic chest pain and cough and hemoptysis without significant embarrassment of cardiac or pulmonary function probably do not require ligation of the vena cava.

PULMONARY EMBOLECTOMY—HISTORICAL NOTES

Trendelenburg[45] described pulmonary embolectomy in 1908 and the procedure was first successfully performed by Kirshner[27] in 1924, and later by Crafoord.[19] Steenburg[44] first successfully performed the Trendelenburg procedure in this country in 1958 and gave a good historical account and review of the subject. Hume[26] has also reviewed the historical aspects of the subject. The design of the operation was complex and hazardous. A cumbersome incision with division of multiple costal cartilages was described, endotracheal anesthesia was poorly appreciated or not available, embolectomy was performed in a hasty and heroic fashion, and there was no means for support of the heart during embolectomy. Finally the diagnosis was probably wrong in a significant number of patients in the absence of pulmonary arteriography. It is not surprising that the operative mortality was forbiding, and surely more patients died than were ever saved. Churchill[6] gave a good review of the matter in 1934.

Allison[1] reported a successful pulmonary embolectomy utilizing hypothermia and inflow occlusion in 1960 and this approach offered significant advantages over the Trendelenburg procedure.

Sharp[40] performed the first successful pulmonary embolectomy with the aid of extracorporeal circulation or bypass which was reported in 1962. Cooley et al[7] reported a similar accomplishment in 1961. Bahnson[3] clarified Sharp's priority. Subsequently more than 24 successful pulmonary embolectomies have been reported utilizing extracorporeal bypass.[4, 37, 38] The actual number of operations probably greatly exceeds this at the present time. There is no real question that pulmonary embolectomy with the advantage of extracorporeal bypass is the procedure of choice.

Bradley[5] and others[25] have reported a semi-closed procedure opening first one and then the other pulmonary artery for embolectomy. This obviously compromises the procedure seriously in every respect and its only justification might be the unavailability of extracorporeal bypass facilities when the emergency presents itself.

THE TECHNIC OF PULMONARY EMBOLECTOMY

The technics of cardiopulmonary bypass are well established and require no discussion for the purposes of this report. The advantages of the technic are enormous. Total bypass results in a relatively bloodless field, embolectomy can be meticulously performed, and perfusion of the heart and body mass are well assured during embolectomy.

The technic of embolectomy is relatively simple. The pulmonary artery is opened when the conditions of total cardiopulmonary bypass exist and embolic and fresh thrombus material removed. Irrigation of the pulmonary arteries and vigorous ventilation of the lungs may yield further embolus and thrombus. Direct massage of the lungs and retrograde flushing through the pulmonary veins with or without thrombolytic agents for the same purpose have been described.[17] In any event, complete embolectomy and thrombectomy has considerable importance in prognosis.

Thirty minues of bypass is usually sufficient, and total operative time rarely exceeds two hours. Ligation or partition of the vena cava should always be performed at the same time.

Preparation for bypass can usually be made in two hours or less. Bank blood with partial dilution for the perfusate is quite satisfactory. Cooley, Beall et al[8] among others have popularized the use of 5% glucose in water as the total prime utilizing a disposable oxygenator. The basic procedure was first described by Zuhdi and Greer et al.[23, 48] The preparations for bypass are thus simplified and abbreviated. The established and proven bypass technics of the surgical team should nevertheless be elected.

Beall and Cooley[4] have also reported the use of a portable bypass apparatus for support of the gravely ill patient pending operative arrangements. The "have pump—will travel" approach would seem to have real merit and alludes to a coming field of temporary and prolonged bypass support.

If thrombectomy has been complete, the results will very likely be excellent. If this is not the case, as was probably true in our patient, the results will be variously comprised.

LIGATION AND PARTITION OF THE INFERIOR VENA CAVA

The indications for ligation of the vena cava in pulmonary embolism are disputed. Many feel that vena cava ligation is required in the patient with serious or recurrent pulmonary embolism. It should always be performed at the same time as pulmonary embolectomy is performed.[11, 12, 35]

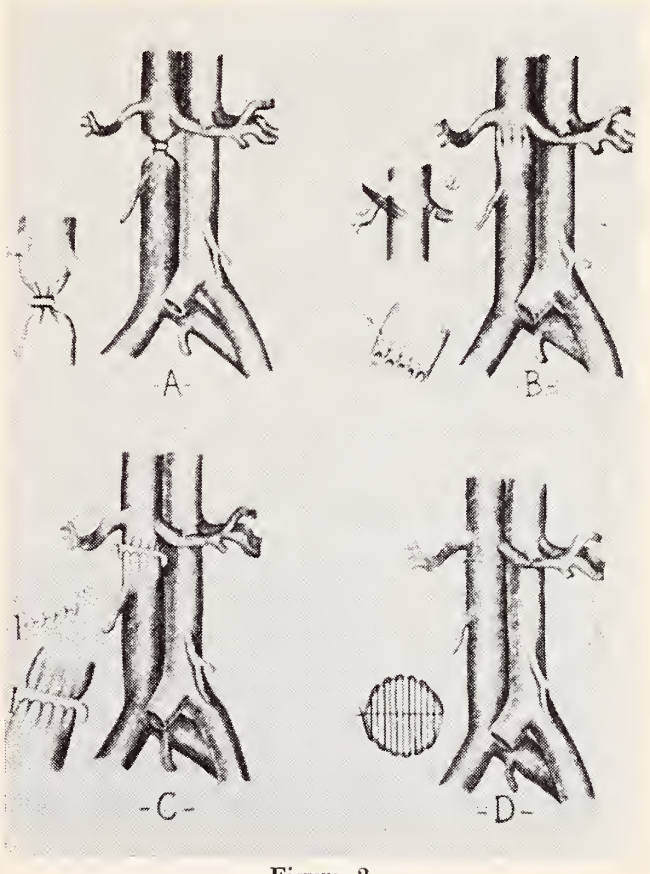


Figure 3

A illustrates ligation of the inferior vena cava, B plication of cava, C application of teflon clip to cava, and D creation of filter of cava. Of the several methods of partition of the vena cava, use of a teflon "clip" appears to be the most popular and convenient. (31, 32, 33)

Ligation of the vena cava is the preferred method by some (35), but is increasingly reserved for septic thrombophlebitis.

"From PULMONARY EMBOLISM, by Arthur C. Beall, Jr., Herbert L. Fred, Denton A. Cooley, in 'Current Problems in Surgery.' Copyright© 1964, Year Book Medical Publishers, Inc. Used by permission of Year Book Medical Publishers."

The controversy partly centers on the after-effects of caval ligation. The character of the venous disease preceding caval ligation with particular reference to the extent of occlusion of the deep veins and the extent of collateral venous

circulation has much to do with the development of the sometimes troublesome after-effects of edema, ulceration and post-phlebitic states.[12]

Because of the sequelae attributed to caval ligation, partition or partial ligation of the vena cava has been described. The design of all such procedures is to permit caval blood flow yet prevent recurrent pulmonary embolism by creating a sieve effect (Fig. 3). Spencer and Quattlebaum et al[43] reported plication of the vena cava. Moretz,[32, 33] Miles,[31] and Lam[28] reported the use of serrated teflon clips for a similar purpose. DeWeese[15] reported the creation of a vena cava filter by continuous suture across the vena cava.

SUMMARY

Massive pulmonary embolism has been defined and its diagnosis and treatment discussed. Pulmonary arteriography is essential prior to the decision for pulmonary embolectomy. Embolectomy utilizing cardiopulmonary bypass is a lifesaving procedure which offers much to the gravely ill patient with massive pulmonary embolism. A case report of a patient with massive pulmonary embolism successfully treated by pulmonary embolectomy utilizing cardiopulmonary bypass is included. It is our intent to emphasize the seriousness of massive pulmonary embolism, the availability of pulmonary embolectomy, and the good results which can be achieved by prompt and vigorous surgical treatment.

BIBLIOGRAPHY

1. Allison, P. R., Dunnill, M. S., and Marshall, R.: Pulmonary Embolism, Thorax 15: 273, 1960.
2. Allison, P.: In discussion Rosenberg, Pearce and McNulty. 37.
3. Bahnson, H. T.: Discussion of Rosenberg, Pearce and McNulty. 37.
4. Beall, A. C., Jr., Fred, H. L., and Cooley, D. A.: Pulmonary Embolism in Current Problems in Surgery, Chicago, 1964, Year Book Medical Publishers, Inc. pp. 3-47.
5. Bradley, M. N., Bennett, A. L., and Lyons, C.: Successful Unilateral Pulmonary Embolectomy without Cardiopulmonary Bypass, New England J. Med. 271: 713, 1964.
6. Churchill, E. D.: Mechanism of Death in Massive Pulmonary Embolism, Surg. Gynec. & Obst. 59: 513, 1934.
7. Cooley, D. A., Beall, A. C., Jr., and Alexander, J. K.: Acute Massive Pulmonary Embolism, J.A.M.A. 177: 283, 1961.
8. Cooley, D. A., Beall, A. C., Jr., and Grondin, P.: Open-Heart Operations with Disposable Oxygenators, 5 per cent Dextrose Prime, and Normothermia, Surgery 52: 713, 1962.
9. Coon, W. W., and Willis, P. W.: Deep Venous Thrombosis and Pulmonary Embolism: Prediction, Prevention, and Treatment, Am. J. Cardiol. 4: 611, 1959.
10. Crane, C.: Deep Venous Thrombosis and Pulmonary Embolism, New England J. Med. 257: 147, 1957.
11. Crane, C.: Femoral VS Caval Interruption for Venous Thromboembolism, New England J. Med. 270: 819, 1964.
12. Dale, W. A.: Ligation of the Inferior Vena Cava for Thromboembolism, Surgery 43: 24, 1958.
13. DeBakey, M. E.: A Critical Evaluation of the Problem of Thromboembolism, Internat. Abst. Surg. 98: 1, 1954.
14. de Takats, G., Beek, W. C., and Fenn, G. K.: Pulmonary Embolism: An Experimental and Clinical Study, Surgery 6: 539, 1939.
15. DeWeese, M. S., and Hunter, D. C., Jr.: A Vena Cava Filter for the Prevention of Pulmonary Embolism, Arch. Surg. 86: 852, 1963.
16. Evoy, M. H.: Fatal Pulmonary Embolism. Clinical Study of 1000 Proven Cases Collected from Literature, Including 130 Personal Cases, Northw. Med. 48: 114, 1949.
17. Gahagan T.: Discussion of Sabiston and Wagner, 38.
18. Gibbon, J. H., and Churchill, E. D.: The Physiology of Pulmonary Embolism, Ann. Surg. 104: 811, 1936.
19. Giertz, K. H., and Crafoord, C.: On the Thromboembolic Disease and its Surgical Treatment, Acta Chir. Scand. 64: 121, 1928.
20. Gore, I., and Tanaka, K.: Phlebothrombosis, Pulmonary Embolization, and Pulmonary Hypertension, Am. J. Med. Sc. 244: 351, 1963.
21. Gorham, L. W.: A Study of Pulmonary Embolism. Part I. A Clinicoathological Investigation of 100 Cases of Massive Embolism of the Pulmonary Artery; Diagnosis by Physical Signs and Differentiation from Acute Myocardial Infarction, Arch. Int. Med. 108: 8, 1961.
22. Gorham, L. W.: A Study of Pulmonary Embolism. Part II. The Mechanism of Death; Based on a Clinicopathological Investigation of 100 Cases of Massive and 285 Cases of Minor Embolism of the Pulmonary Artery, Arch. Int. Med. 108: 79, 1961.
23. Greer, A. E., Carey, J. M., and Zuhdi, N.: Hemodilution Principle of Hypothermic Perfusion, J. Thoracic and Cardiovas. Surg. 43: 640, 1962.
24. Harrison, W., and Liebow, A. A.: Gas Exchange in Lung Deprived of Pulmonary Arterial Supply, Yale J. Biol. & Med. 22: 251. 1950.
25. Houk, V. N., Hufnagel, C. A., McClenathan, J. E., and Moser, K. M.: Chronic Thrombotic Obstruction of Major Pulmonary Arteries: Report of a Case Successfully Treated by Thromboendarterectomy and Review of the Literature, Am. J. Med. 35: 269, 1963.
26. Hume, M.: Pulmonary Embolism, Arch. Surg. 87: 709, 1963.
27. Kirschner, M.: Ein durch die Trendelenburgs he Operation geheilter Fall von Embolie der Art pulmonalis, Arch. klin. Chir. 133: 312, 1924.
28. Lam, C.: Discussion of Rosenberg, Pearce, and McNulty, 37.
29. Matas, R.: Postoperative Thrombosis and Pulmonary Embolism before and after Lister. A Retrospect and Prospect, Univ. Toronto M. Bull. 10: 1, 1932.
30. McGinn, S., and White, P. D.: Acute Cor Pulmonale Resulting from Pulmonary Embolism: Its Clinical Recognition, J.A.M.A. 104: 1473, 1935.
31. Miles, R. M.: Discussion of Spencer, et al. 43.
32. Moretz, W. M.: Discussion of DeWeese and Hunter. 15.
33. Moretz, W. H., Rhode, C. M., and Shepherd, M. H.: Prevention of Pulmonary Emboli by Partial Occlusion of the Inferior Vena Cava, Am. Surgeon 25: 617, 1959.
34. Nelson, J. R., and Smith, J. R.: The Pathologic Physiology of Pulmonary Embolism: A Physiologic Discussion of the Vascular Reactions Following Pulmonary Arterial Obstruction by Emboli of Varying Size, Am. Heart J. 58: 916, 1959.
35. Ochsner, A.: Indications for and Results of Inferior Vena Caval Ligation for Thrombolembolic Disease, Postgrad. Med. 27: 193, 1960.
36. Robin, E. D., Julian, D. G., Travis, D. M., and Crump, C. H.: Physiologic Approach to Diagnosis of Acute Pulmonary Embolism. New England J. Med. 260: 586, 1959.
37. Rosenberg, D. M. L., Pearce, C., and McNulty, J.: Surgical Treatment of Pulmonary Embolism, J. Thoracic & Cardiovas. Surg. 47: 1, 1964.
38. Sabiston, D. C., Jr., and Wagner, H. N.: The Pathophysiology of Pulmonary Embolism: Relationships to Accurate Diagnosis and Choice of Therapy, J. Thoracic & Cardiovas. Surg. 50: 339, 1965.
39. Sasahara, A. A., Stein, M., Simon, M., and Littman, D.: Pulmonary Angiography in the Diagnosis of Thromboembolic Disease, New England J. Med. 270: 1075, 1964.
40. Sharp, E. H.: Pulmonary Embolectomy, Ann. Surg. 156: 1, 1962.
41. Smith, G. T., Dammin, G. T., and Dexter, L.: Postmortem Arteriographic Studies of the Human Lung in Pulmonary Embolization, J.A.M.A. 188: 135, 1964.
42. Sautter, R. D., Fletcher, F. W., Emanuel, D. A., Newton, B. R., and Olsen, T. G.: Complete Resolution of Massive Pulmonary Thromboembolism, J.A.M.A. 189: 172, 1964.
43. Spencer, F. C., Quattlebaum, J. K., Quattlebaum, J. K., Jr., Sharp, E. H., and Jude, J. R.: Plication of the Inferior vena Cava for Pulmonary Embolism: A Report of 20 Cases, Ann. Surg. 155: 827, 1962.
44. Steenburg, R. W., Warren, R., Wilson, R. E., and Rudolf, L. E.: A New Look at Pulmonary Embolectomy, Surg. Gynec. & Obst. 107: 214, 1958.
45. Trendelenburg, F.: Ueber die Operative Behandlung der Embolie der Lungenarterie, Arch. klin. Chir. 86: 686, 1908.
46. Wagner, H. N., Sabiston, D. C., Jr., McAfee, J. G., Tow, D., and Stern, H. S.: Diagnosis of Massive Pulmonary Embolism in Mann by Radioisotope Scanning, New England J. Med. 271: 377, 1964.
47. Westermark W.: Cited by Gorham, 21.
48. Zuhdi, N., McCollough, B., Carey, J., and Greer, A.: Double Helical Reservoir Heart-Lung Machine, Designed for Hypothermic Perfusion, Primed with 5% Glucose in Water, Inducing Remodilution, A.M.A. Arch. Surg. 82: 320, 1961.

Prematurity and Adaptive Behavior in Mental Retardates

Byron C. Moore, Ed.D.

In a population of mental retardates, the impairment of adaptive behavior varies significantly with the degree of prematurity. Reduction of mortality rate is not an unmixed blessing at either extreme of the spectrum of age.

Introduction

IN recent years, increasing impetus has been directed toward the discovery and understanding of etiological factors that influence both the incidence and severity of mental deficiency. Some of this research has presented evidence that prematurity is associated with mental deficiency as well as a number of other handicapping conditions, (Lubchenko, Horner, Reed, Hix, Metcalf, Cohig, Elliott, and Bourg, 1963; Lilienfeld, Pasamanick and Rogers, 1955; Owens and Owens, 1949; Beskow, 1949; Crosse, 1957; Inman-Kane, 1933; Drillien, 1961; Dann, Levine and New, 1958; Harper, Fischer, and Rider, 1959; Moore, 1965). Recognition of the premature birth rate as an international health problem has, for the past several years, emphasized the need for reduction of incidence rates and development of improved postnatal care for premature babies. Consequently, there has been a steady decline in mortality among premature infants, which in turn, has resulted in the survival of handicapped children whose counterparts had not survived in previous years.

A child born following a full-term pregnancy has presumably advanced to a stage of development that permits successful transition to the extrauterine environment. The infant who has been born prematurely must make the same adjustment to life as the full-term infant – but must do so under handicaps of immaturity proportional to the term of uncompleted fetal life. It was Parmalee's opinion (1959) that the success of an infant's adjustment to extrauterine life is, in large measure, dependent upon the degree of fetal maturity. It would appear that just as postnatal survival is dependent upon fetal maturation, so is the infant's ability to resist and overcome handicapping conditions.

University of Missouri
Columbia, Missouri
The author was Director of Psychological Services at the Arizona Children's Colony, Coolidge, Arizona, when the study was undertaken.

The next logical step is to question if there is a direct relationship between the degree of prematurity and the degree of adaptive behavior — which is the intent of this study.

A survey of the retarded population at the Arizona Children's Colony was undertaken. Out of 814 case histories reviewed, 137 retardates were located who had been born with birth weights of less than five and one-half pounds. In addition, data regarding sensory impairments, convulsive disorders, motor dysfunctions, parity, maternal age, sex and level of social competence were also compiled. The latter information was obtained by administering the Vineland Social Maturity Scale (Doll, 1953) and computing a social quotient (S.Q.) for each child. The Vineland Social Maturity Scale is considered the best single measure of adaptive behavior currently available. (Heber, 1959)

The Study Population

There were 65 males and 72 females within the total of 137 retardates. Their ages range between 2 and 31 years with a mean age of 14.2 years. Ninety-five, or 69% of the study group are clasified as "white." Although Mexican-Americans are generally classified as members of the white group, they were classified separately for the purposes of this study. The Mexicans constitute 18% of the study population, followed by Negroes at 9%. Five Indian premature-retardates are also included in the study and accounted for 4% of the group. The total "non-white" group represented 31% of the study population.

Maternal ages ranged from 12 years to 54 years of age with a mean age of 27. Parity range from 1 to 18 with a mean of 3.

Twenty-three percent of the study group suffer from special sense impairments, 34% of the study population either have histories of convulsive disorders or are considered to be active seizure patients; while 45% of the group have some type of motor dysfunction such as cerebral palsy.

A wide variety of etiological classifications are noted. Table 1 lists the various classifications represented.

TABLE I

Etiological Classification of 137 Premature-Retardate Persons Residing at the Arizona Children's Colony

Code Number	Description	Male	Female	Total
11	Prenatal infection	2	3	5
12	Postnatal cerebral infection	1	6	7
21	Toxemia of pregnancy	1	1	2
23	Bilirubin encephalopathy	2	1	3
31	Prenatal injury	0	3	3
32	Mechanical injury at birth	5	7	12
33	Anoxemia at birth	8	4	12
34	Postnatal injury	4	1	5
42	Phenylketonuria	4	1	5
49	Unknown growth, metabolic or nutritional disorder	0	1	1
51	Neurofibromatosis	1	0	1
61	Congenital cerebral defect	4	2	6
63	Laurence-Moon-Biedl Syndrome	1	0	1
64	Mongolism	8	5	13
78	Prematurity	27	31	58
81	Cultural-familial	0	2	2
Totals		65	72	137

Code 78, Encephalopathy associated with prematurity is assigned where prematurity was the only known etiological factor (Heber, 1959). This is the largest single etiological division found in the study, accounting for 37.2% of the population. Problems associated with the birth episode are listed in 24 cases or 18.5% of the group. Table II outlines the mean and median figures for the population's birth weights and social quotients.

TABLE II

Measures of Central Tendency of the Study Population

	Birth Weight in Ozs.		VSMS Social Quotients	
	Mean	Median	Mean	Median
Male	68.9	68.8	35.9	31.0
Female	72.3	79.0	33.4	32.0
Total	70.3	73.9	34.6	31.0

Statistical Procedure

Due to the non-parametric character of the data, the Mann Whitney U Test (Siegel, 1956) was selected to test the hypothesis predicting that the premature-retardates below the birth weight median for the group would have significantly lower social quotients than the premature-retardates with birth weights above the median.

The Study Results

Application of the Mann-Whitney U Test to the data derived a Z-score of 2.74 which is significant at the .003 level of confidence. This highly significant study result would seem to

indicate that not only is the degree of prematurity related to the degree of intellectual loss, (Moore, 1965) but also the greater the degree of prematurity, the more seriously impaired the premature-retardate child is in terms of his ability to adapt to postnatal life.

Since the conclusions of this study are based on data taken from a population known to be retarded, the implications are limited to this and like populations. A similar study based on a heterogenous sample of children born with premature birth weights should be of interest and value.

REFERENCES

Beskow, B. Fodelse-och Tillvaxtvikt hos Nervosa Barn under de Forsta Levnadsaren, Norkisk Medicin., 39/39, 1714-1718, 1948. (Excerpta Medica, Section 8, Neurology and Psychiatry, 2:2939, 1949.)

Crosse, V. Mary. **The Premature Baby.** Little, Brown and Co., Boston, 1957.

Dann, Margaret, Levine, S. Z., and New, Elizabeth. The Development of Premature Born Children with Birth Weights or Minimal Postnatal Weights of 1,000 Grams or Less, **Pediatrics,** 22:1037-1053, 1958.

Drillien, C. M. A Longitudinal Study of the Growth and Development of Prematurely and Maturely Born Children. Part VII. Mental Development 2-5 Years, **Archives of Diseases of Childhood,** 36:233-240, 1961.

Doll, Edgar A., **The Measurement of Social Competence.** Educational Test Bureau. Minneapolis, 1953.

Harper, Paul A., Fischer, L., and Rider, R. Neurological and Intellectual Status of Prematures at Three to Five Years of Age, **The Journal of Pediatrics,** 55:679-690, 1959.

Heber, Rick. A Manual on Terminology and Classification in Mental Retardation. **American Journal of Mental Deficiency.** 64:1-111. 1959.

Inman-Kane, C. The Relation of Premature Birth and Underweight Condition at Birth to Mental Deficiency, **Psychological Bulletin,** 30:596-597, 1933.

Lilienfeld, Abraham M., Pasamanick, Benjamin, and Rogers, M. E. Relationship Between Pregnancy Experience and Development of Certain Neuropsychiatric Disorders in Childhood, **American Journal of Public Health,** 45:637-643, 1955.

Lubchenko, L. O., Horner, F. A., Reed, L. H., Hix, J. E., Jr., Metcalf, D., Cohig, R., Elliott, H. C., and Bourg, M. Sequalae of Premature Infants of Low Birth Weights at Ten Years of Age, **American Journal Diseases of Childhood,** 106:101-115, 1963.

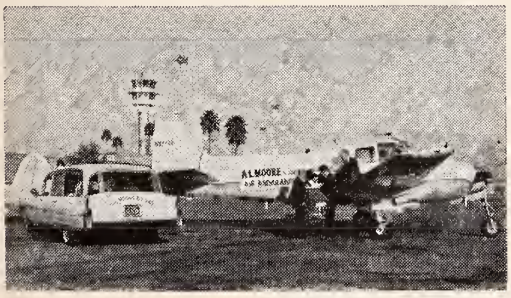
Moore, Byron C. Relationship Between Prematurity and Intelligence in Mental Retardates. **American Journal of Mental Deficiency,** 70:448-453, 1965.

Owens, W. C., and Owens, E. U. Retrolental Fibroplasia in Premature Infants, **American Journal of Ophthalmology,** 32:1631-1637, 1949.

Paramlee, Arthur H. **Management of the Newborn.** The Yearbook Publisher, Chicago, 1959.

Siegel, Sidney. **Nonparametric Statistics for the Behavioral Sciences.** McGraw-Hill Book Co., Inc., New York, 1956.

24-HOUR AMBULANCE SERVICE



MOTOR AND AIR

A. L. MOORE & SONS

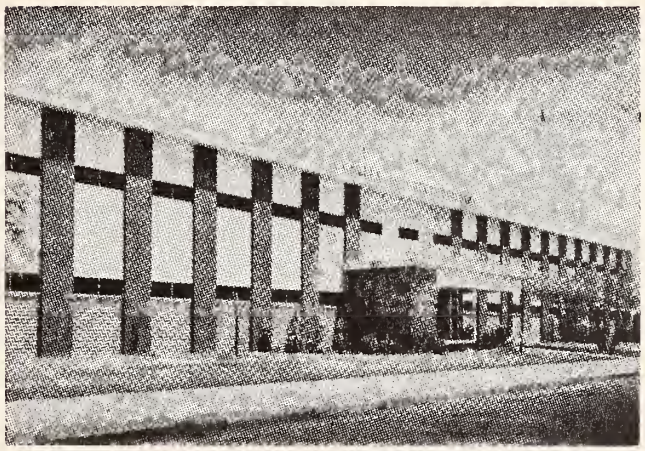
Mortuary and Ambulance Service

Adams at Fourth Ave., Phoenix

AL 2-3411

Baptist Medical Center

HOSPITAL MEDICAL CENTER, LTD.

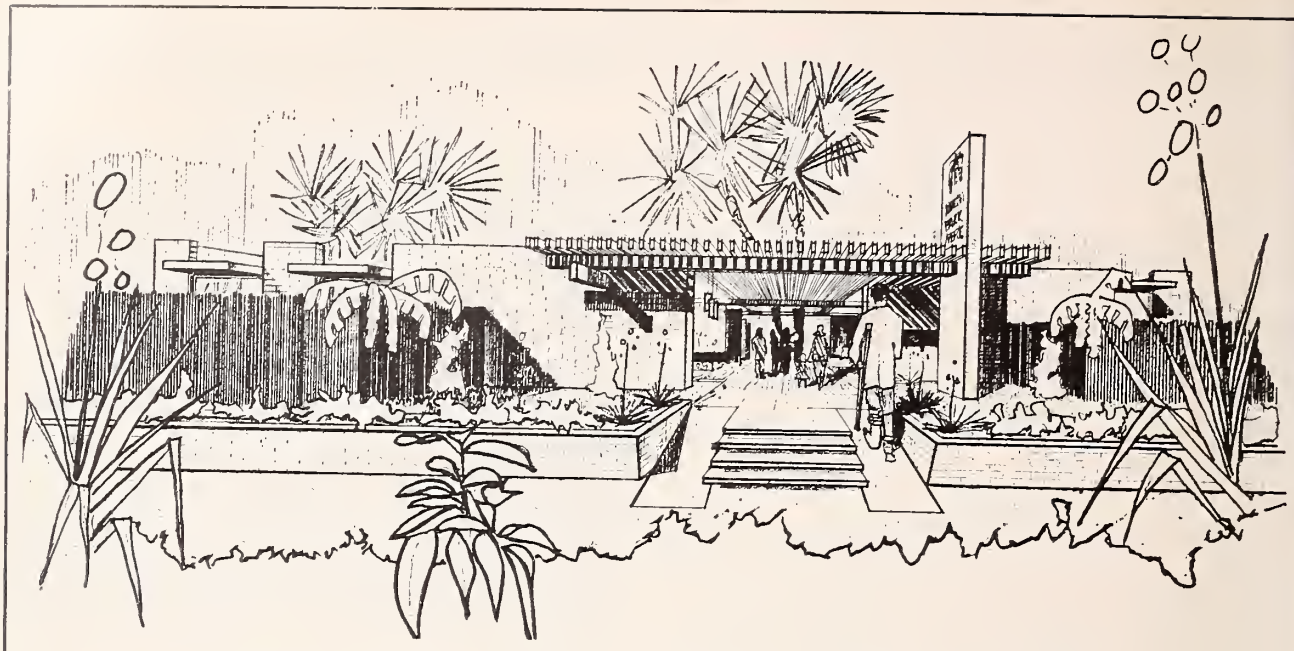


100 E. FOURTH ST. SCOTTSDALE, ARIZONA

Adjoining Scottsdale Baptist Hospital

ANESTHESIOLOGIST
Sue Boyett, M.D.
FAMILY DOCTOR
Jack E. Groh, M.D.
William B. McGahey, M.D.
John A. Martin III, M.D.
Edward A. Wilson, M.D.
GENERAL SURGERY
Boyd H. Metcalf, M.D.
George H. Mertz, M.D.
Jack O. McFarland, M.D.
GENERAL SURGERY — CANCER
Herbert N. Munhall, M.D.
INTERNAL MEDICINE & CARDIOLOGY
John F. Currin, M.D.
OBSTETRICS & GYNECOLOGY
Roy O. Young, M.D.
OPHTHALMOLOGY
Peter S. Sykowski, M.D., F.A.C.S.
Robert L. Yockey, M.D.
eye physician and surgeon
ORAL SURGERY
Ralph G. Peterson, D.D.S.
ORTHODONTIST
James C. Toye, D.D.S.
ORTHOPEDIC SURGERY
Edward E. Conn, M.D.
Malcolm F. Dorfman, M.D.
Willard S. Hunter, M.D.
PATHOLOGY
Thomas B. Jarvis, M.D.
Fred C. Schoene, M.D.
PERIODONTIST
J. Richard Loughry, D.D.S.
PLASTIC SURGERY
Morris Barton, M.D.
THORACIC CARDIOVASCULAR SURGERY
Carl Impellitier, M.D.
UROLOGIC SURGERY
Wilfred M. Potter, M.D.
RADIOLOGY
M. Herbert Nathan, M.D.
DENTISTRY
Lumone E. Willmeng, D.D.S.
OTHERS
Jean Hoffman, Reg. Physical Therapist
Pharmacy
Scottsdale Opticians

For Leasing Information Call
946-9091 or 946-5344



Deluxe Medical Suites Available December 1966

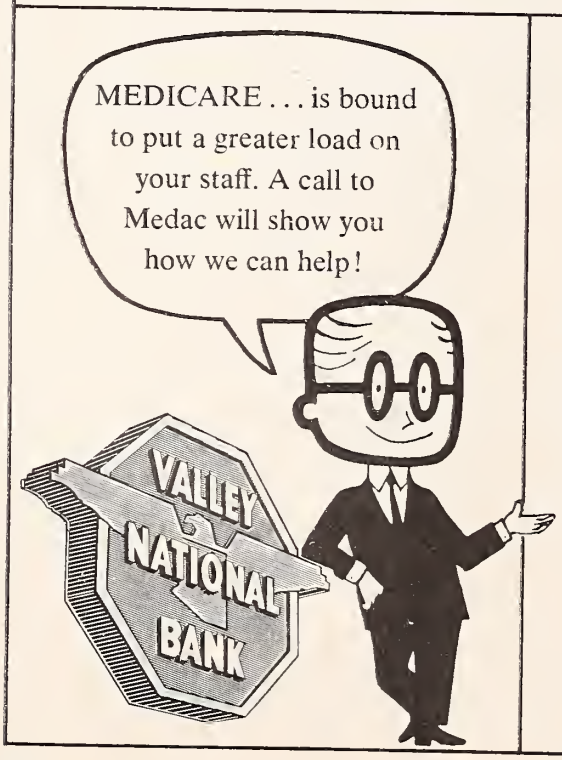
NORTH PARK MEDICAL CENTER

78 West Ray Road
Chandler, Arizona

SHULTS REALTY CO.
969-5509

Doctor: Cut your billing and bookkeeping costs!

The Valley Bank offers you "Medac" – Arizona's most *complete*, automated medical-dental billing-bookkeeping service.



* Speeds your accounts receivable collections.
* Gives you up-to-the-minute reports of your balance sheet and P.&L. as frequently as every ten days.
* Provides smooth, efficient continuity despite personnel turnover.

This is a dependable, accurate, *quality* service which we believe to be the best in the U.S. The doctors we now serve are delighted with its results.

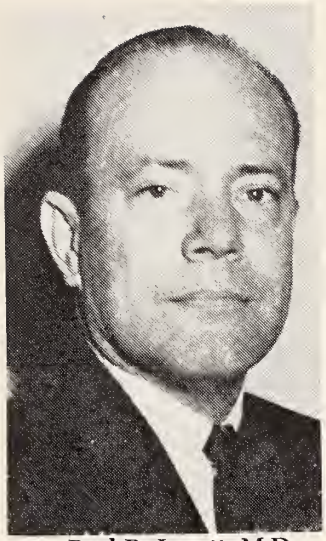
Before you consider *any* service system, let a VNB representative show you the very real advantages of VNB-MEDAC – at your convenience (and without obligation).

CONTACT ANY VALLEY BANK OFFICE

or phone:

in Phoenix
Bud Gray **261-1317**

in Tucson
Don Markle **624-8711**



Paul B. Jarrett, M.D.

Discouraging? Yes! Hopeless? No!

When I was a boy, I tried to nurse back to health sick and wounded birds that I found. They all died! This was hard on me both from the emotional impact and from the conviction that my labors were useless. I asked my father how long I should continue these efforts. He told me that we never discontinue doing something that is proper and needful simply because it is discouraging or seemingly futile.

There is no doubt in my mind what my father's advice would be today if he could be asked how much longer I should contribute to the political chances of candidates who favor medicine's views, when so far these aspirants have been licked to a frazzle.

He would say that, if I honestly believe that loss of personal integrity (the development of a philosophy that as Americans we are no longer financially responsible for our welfare, or morally responsible for our actions) is the beginning of our national downfall, then I must do anything and everything to protect our heritage.

It isn't enough to decry the passing of the independent era and the coming of the Welfare State.

We need to hear a lot less griping and see a lot more membership in ArMPAC. This group, under Dr. John Kahle, will do a job if you will give them the required support.

The primaries are upon us. The time is now, and the need is urgent!

Please!

Can't you see how "proper and needful" it is?

"A DRAMATIC INCREASE IN *SALMONELLOSIS* HAS BEEN OBSERV

ALMONELLA CARRIERS PRESENT A FORMIDABLE FIFTH COLUMN."[2]

Furoxone exerts "outstanding activity against Salmonella sp."[3] and "has enhanced the physicians' armamentarium in that it now affords a relatively effective, safe bactericidal agent, which may be used to treat the active disease as well as the carrier state".[2]

SALMONELLA SPECIFIC

FUROXONE®

FURAZOLIDONE LIQUID/TABLETS

Often succeeds where others fail in a wide variety of bacterial diarrheas. Specifically within the broad bactericidal range of Furoxone:

Salmonella paratyphi	Salmonella montevideo
Salmonella schottmülleri	Salmonella newport
Salmonella typhimurium	Salmonella anatum
Salmonella choleraesuis	Salmonella derby
Salmonella enteritidis	

Proper antibacterial therapy for individual cases should help in reducing the total number of cases in an epidemic situation.

Side effects are infrequent. A few hypersensitivity reactions to Furoxone have been reported including a fall in blood pressure, urticaria, fever, arthralgia and a vesicular or morbilliform rash. These reactions subsided promptly following withdrawal of the drug. Primaquine-sensitive patients may develop a mild reversible hemolytic anemia. Nausea, emesis, headache or malaise may occur occasionally. To obviate alcohol-disulfiram type reactions, advise against use of alcohol-containing drugs during therapy and four days thereafter.

Do not give to infants under one month of age.

Composition: Furoxone Liquid contains, per 15 cc. tablespoonful, furazolidone 50 mg., pectin 225 mg., and kaolin 3.0 Gm. Furoxone Tablets each contain 100 mg. of furazolidone.

References: 1. Editorial: J.A.M.A. *189*:691 (Aug. 31) 1964. 2. Foertsch, J. H.: J. Oklahoma Med. Assn. *57*:449 (Oct.) 1964. 3. Paul, H. E., and Paul, M. F.: The Nitrofurans—Chemotherapeutic Properties, in Schnitzer, R. J., and Hawking, F. (Eds.) Experimental Chemotherapy, Vol. 2, New York, Academic Press, 1964.

Originators and Developers of The Nitrofurans
EATON LABORATORIES
Division of The Norwich Pharmacal Company
NORWICH, NEW YORK

Eaton®

Behind continued high blood pressure readings lies the possibility of organic damage[1-13]

MANY OF THE aspects of essential hypertension are unpredictable—either because there are a number of mechanisms involved or because individuals differ in their responses to these mechanisms.[1]

There is one aspect of hypertension, however, that seems, in many cases, predictable. ". . . when the blood pressure is elevated to a marked degree for an adequate period of time, this in itself leads to perpetuation of the syndrome with resulting vascular damage throughout the body."[14] All too often the disease progresses until there is damage to one of three vital organs: the heart, the kidney, the brain.





"Hypertension is certainly a major factor in the genesis of coronary heart disease, and it is even more important when compounded with obesity."[4]

"[Vascular deterioration] can be clearly seen in the kidney with a degree of damage that can be measured by renal function studies."[10]

". . . most evidence suggests that reduction of blood pressure, when it is too high, not only relieves the heart of excess work but reduces vascular damage."[1]

"In short, treatment is indicated."[1]

Antihypertensive therapy will not restore the blood vessels to normal. Yet many of the vascular changes and symptoms caused by increased blood pressure may be arrested or alleviated when the blood pressure is reduced to normotensive levels.[7]

Reducing the blood pressure helps curtail further vascular damage and improves the prognosis — when damage is not too far advanced before therapy is started.[14] Essential hypertension is an indication not only for treatment, but for *early* and adequate treatment of the patient in question.

Reduce the blood pressure with Rautrax-N

Rautrax-N combines the antihypertensive-tranquilizing action of whole root rauwolfia with the antihypertensive-diuretic action of bendroflumethiazide in one convenient medication. The two drugs complement each other so that smaller doses of both are possible.

Rauwolfia combined with bendroflumethiazide is particularly effective in long-term therapy,[15-17] since beneficial effects do not diminish with continuous daily administration.

For most patients 1 or 2 Rautrax-N tablets daily are sufficient for maintenance therapy. The simplicity, convenience and economy of such a dosage schedule are of particular benefit to older patients.

References: 1. Page, I. H., and Dustan, H. P.: The Usefulness of Drugs in the Treatment of Hypertension, in Ingelfinger, F. J.; Relman, A. S., and Finland, M.: Controversy in Internal Medicine, Philadelphia, W. B. Saunders Co., 1966, p. 95. **2.** Hollander, W.: The Evaluation of Antihypertensive Therapy of Essential Hypertension in Ingelfinger, F. J.; Relman, A. S., and Finland, M.: Controversy in Internal Medicine, Philadelphia, W. B. Saunders Co., 1966, p. 97. **3.** Nickerson, M.: Antihypertensive Agents and the Drug Therapy of Hypertension, in Goodman, L. S., and Gilman, A.: The Pharmacological Basis of Therapeutics, ed. 3, New York, The Macmillan Co., 1965, p. 727. **4.** Berkson, D. M.: Indust. Med. & Surg. **32**:371, 1963. **5.** Cohen, B. M.: M. Times **91**:645, 1963. **6.** Lee, R. E., et al.: Am. J. Cardiol. **11**:738, 1963. **7.** Moyer, J. H.: Am. J. Cardiol. **9**:821, 1962. **8.** Moser, M.: New York J. Med. **62**:1177, 1962. **9.** Wood, J. E., and Battey, L. L.: Am. J. Cardiol. **9**:675, 1962. **10.** Moyer, J. H., and Heider, C.: Am. J. Cardiol. **9**:920, 1962. **11.** Moser, M., and Macaulay, A. I.: New York State J. Med. **60**:2679, 1960. **12.** Judson, W. E.: Nebraska M. J. 44:305, 1959. **13.** Hodge, J. V.; McQueen, E. G., and Smirk, H.: Brit. M. J. **1**:5218, 1961. **14.** Moyer, J. H., and Brest, A. N.: Hypertension Recent Advances, Philadelphia, Lea & Febiger, 1961, p. 633. **15.** Berry, R. L., and Bray, H. P.: J. Am. Geriatrics Soc. **10**:516, 1962. **16.** Reid, W. J.: J. Am. Geriatrics Soc. **13**:365, 1965. **17.** Feldman, L. H.: North Carolina M. J. **23**:248, 1962.

Contraindications: Severe renal impairment or previous hypersensitivity. **Warning:** Ulcerative small bowel lesions have occurred with potassium-containing thiazide preparations or with enteric-coated potassium salts supplementally. Stop medication if abdominal pain, distension, nausea, vomiting or G.I. bleeding occur.

Precautions and Side Effects: The dose of ganglionic blocking agents, veratrum or hydralazine when used concomitantly must be reduced by at least 50% to avoid orthostatic hypotension. Caution is indicated in patients with depression, suicidal tendencies, peptic ulcer; electrolyte disturbances are possible in cirrhotic or digitalized patients. Marked hypotension during surgery is possible; consider discontinuing two weeks prior to elective surgery and observe patients closely during emergency surgery. Rauwolfia preparations may cause reversible extrapyramidal symptoms and emotional depression, diarrhea, weight gain, edema, drowsiness may occur. Bendroflumethiazide may cause increases in serum uric acid, unmask diabetes, increase glycemia and glycosuria in diabetic patients, and may cause hypochloremic alkalosis, hypokalemia; cramps, pruritus, paresthesias, rashes may occur.

Dosage and Supply: Initial dosage, 1 to 4 tablets daily, preferably at mealtime. Maintenance, 1 or 2 tablets daily. Rautrax-N is supplied as capsule-shaped tablets containing 50 mg. Rauwolfia serpentina whole root (Raudixin®), 4 mg. bendroflumethiazide (Naturetin®), 400 mg. potassium chloride.

Also available: Rautrax-N Modified — capsule-shaped tablets containing 50 mg. Rauwolfia serpentina whole root (Raudixin), 2 mg. bendroflumethiazide (Naturetin), 400 mg. potassium chloride. Both potencies available in bottles of 100. For full information, see Product Brief.

RAUTRAX®-N

Squibb Rauwolfia Serpentina Whole Root (50 mg.) with Bendroflumethiazide (4 mg.) and Potassium Chloride (400 mg.)

A Teaching Hospital—1

We have just reached the stage at which the schematic design of a teaching hospital must be completed. This has prompted the suggestion that we review some of the considerations which underlay the decision in favor of having the University own and operate its own teaching hospital. This question has been given a great deal of thought during the several years in which the feasibility of starting a new medical school was determined.

The consultants to the Arizona Board of Regents apparently also gave very serious consideration to this question during their survey in 1960-61. They reviewed the existing and projected load on the clinical facilities which were already in existence in the metropolitan areas and sampled the viewpoints of civic and physician leaders with respect to this question in both of the major metropolitan areas. Their written conclusion was as follows: "A university hospital should be considered the laboratory of the clinical medical sciences. It should be designed specifically for teaching and research. It is recommended that a university hospital be constructed on the campus adjoining the Medical Science Building."

The question of ownership of a hospital by a medical school has fascinating historical precedents, mostly traceable to recent European history where many medical schools were hospital-based, rather than university-based. When medical schools started in America we acknowledged that precedent early. For example, the Pennsylvania Hospital was opened in Philadelphia in a small, converted residence early in 1752 and moved, four years later to a completely new structure. The founders of that institution stated that this new hospital would make an excellent institution in which to initiate lectures in medical education and, therefore, clinical lectures were started there in 1766. When the University of Pennsylvania moved to a new site in 1873 it constructed its own hospital. This is said to have been the first to be built in this country exclusively for the use of a medical school. A few years earlier, in 1869, the University of Michigan had remodeled an existing building in order that it might be used as a teaching hospital for the medical school there, as well as for community service; and, there is some evidence that the Medical College of South Carolina may have actually been the first to own and operate a teaching hospital since, in 1828 it established an "Infirmary for Surgical Cases in Connection with the College." It was in this same manner that Johns Hopkins Hospital was staffed and operated in 1889 just before the opening of its School of Medicine.

When Arizona's survey team reached its conclusion advising university ownership of a teaching hospital it doubtless had such precedents in mind. There is evidence that similar reasoning has prevailed elsewhere in the United States and Canada in the past two or three decades. Note, for example, that in the instance of every publicly supported medical school which has been developed since the Second World War the decision has been made that the parent university should own and operate its teaching hospital. In the majority of instances this is also true for the medical schools which are privately supported. However, there are two reasons why this situation may be different for the private school. First, the privately supported medical school is not obligated to provide service to the state in which it is located; therefore, its clinical teaching requirements can often be met in an affiliated hospital. Second, as noted in Europe, when a college of medicine originates within an already existing hospital its requirements can be willingly accommodated by the existing staff of that hospital by the use of their patients for teaching purposes. However, when a new medical school is organized outside of a hospital, but intends to use the hospital for its clinical programs, there is a necessary "invasion" of the hospital by medical school interests which is not always compatible with the community-oriented mission of the hospital. These problems are avoided when the university operates its own hospital.



PRINCIPLES OF MEDICAL ETHICS

Preamble. — These principles are intended to aid physicians individually and collectively in maintaining a high level of ethical conduct. They are not laws but standards by which a physician may determine the propriety of his conduct in his relationship with patients, with colleagues, with members of allied professions, and with the public.

Section 1. — The principal objective of the medical profession is to render service to humanity with full respect for the dignity of man. Physicians should merit the confidence of patients entrusted to their care, rendering to each a full-measure of service and devotion.

Section 2. — Physicians should strive continually to improve medical knowledge and skill, and should make available to their patients and colleagues the benefits of their professional attainments.

Section 3. — A physician should practice a method of healing founded on a scientific basis; and he should not voluntarily associate professionally with anyone who violates this principle.

Section 4. — The medical profession should safeguard the public and itself against physicians deficient in moral character or professional competence. Physicians should observe all laws, uphold the dignity and honor of the profession and accept its self-imposed disciplines. They should expose, without hesitation, illegal or unethical conduct of fellow members of the profession.

Section 5. — A physician may choose whom he will serve. In an emergency, however, he should render service to the best of his ability. Having undertaken the care of a patient, he may not neglect him; and unless he has been discharged he may discontinue his services only after giving adequate notice. He should not solicit patients.

Section 6. — A physician should not dispose of his services under terms or conditions which tend to interfere with or impair the free and complete exercise of his medical judgment and skill or tend to cause a deterioration of the quality of medical care.

Section 7. — In the practice of medicine a physician should limit the source of his professional income to medical services actually rendered by him, or under his supervision, to his patients. His fee should be commensurate with the services rendered and the patient's ability to pay. He should neither pay nor receive a commission for referral of patients. Drugs, remedies or appliances may be dispensed or supplied by the physician provided it is in the best interests of the patient.

Section 8. — A physician should seek consultation upon request; in doubtful or difficult cases; or whenever it appears that the quality of medical service may be enhanced thereby.

Section 9. — A physician may not reveal the confidences entrusted to him in the course of medical attendance, or the deficiencies he may observe in the character of patients, unless he is required to do so by law or unless it becomes necessary in order to protect the welfare of the individual or of the community.

Section 10. — The honored ideals of the medical profession imply that the responsibilities of the physician extend not only to the individual, but also to society where these responsibilities deserve his interest and participation in activities which have the purpose of improving both the health and the well-being of the individual and the community.



This Ain't No Time To Blow Our Cool!!

Slang and jargon are integral segments of the English language exhibiting eccentric humor and comprising certain widely current terms. With all the dignity remaining at my command, let me submit the following this mid-August, 1966, both because it is so expressive and because it states so succinctly with a bit of a chuckle something which we may all well bear in mind.

Twenty years ago physicians praised the Lord, passed the ammunition, and referred to irretrievably confused situations as SNAFU and FUBAR.

Ten years ago, in another action, we stayed loose and drank cold water so we didn't have to press the panic button to get a monkey off our back.

Today we don't mess with something real boss or which sends us for fear it might become so gross that we could no longer make out and would have to hang it in our ear.

After six weeks of P.L. 89-97, I can only reflect upon the surcease and satisfaction that some of the above idiomatic expressions have given me in other stress situations, and offer the following as a modicum of advice.

FOR SURE IT'S NO GAS, MAN, BUT THIS AIN'T NO TIME TO BLOW OUR COOL!!!!

Roland F. Schoen, M.D.

ARIZONA MEDICINE

Roland F. Schoen, M.D.**Editor**
Mr. Bruce E. Robinson**Managing Editor**
Mrs. **Evelyn Kuebler****Editorial Assistant**

ASSISTANT EDITORS
Original Articles
Mayer Hyman, M.D. — Preston J. Taylor, M.D.
Kenneth Johnson, M.D. — Robert F. Lorenzen, M.D.

Editorial Section
R. Lee Foster, M.D. — William B. McGrath, M.D.
John R. Green, M.D. — Leslie B. Smith, M.D.
John W. Kennedy, M.D.

ASSOCIATE EDITORS
Earl J. Baker, M.D. Civil Defense
Max Baumeister, Jr., M.D. Anesthesiology
Chester G. Bennett, M.D. General Surgery
William E. Crisp, Jr., M.D. Obstetrics and Gynecology
Philip E. Dew, M.D. Pediatrics
Charles W. Elkins, M.D. Neurosurgery
Eugene Leibsohn, M.D. Dermatology
James D. Nauman, M.D. ..Medical Society of U.S. & Mexico
William M. Hindman, M.D. Pathology
C. Thomas Read, M.D. Thoracic Surgery
Wallace A. Reed, M.D. Medical Economics
Paul L. Singer, M.D. Genito-Urinary
George A. Spendlove, M.D. Public Health
Alvin L. Swenson, M.D. Orthopedics
William G. Ure, M.D. Tuberculosis

Editorials of Arizona Medicine are the opinions of the authors and do not necessarily represent the official stand of The Arizona Medical Association, Inc. The opinions of the Board of Directors may be sought in the published proceedings of that body.

Address all correspondence to the
Journal Offices
4601 N. Scottsdale Rd., Scottsdale, Ariz. 85251

Bruce E. Robinson
Business Manager

National Representative
State Journals West
Melvin B. Tyler, Advertising Manager
683 Sutter Street
San Francisco, California 94102

"The material in this journal is not copyrighted. We ask that anyone using material from it note the previous publication in ARIZONA MEDICINE."

CONTRIBUTIONS

The Editor sincerely solicits contributions of scientific articles for publication in ARIZONA MEDICINE. All such contributions are greatly appreciated. All will be given equal consideration.

Material submitted for publication in ARIZONA MEDICINE should conform to the following policies:

1. Manuscripts, including references or bibliography, should be typewritten, double-spaced, on one side of the paper only, and the original and a carbon enclosed.

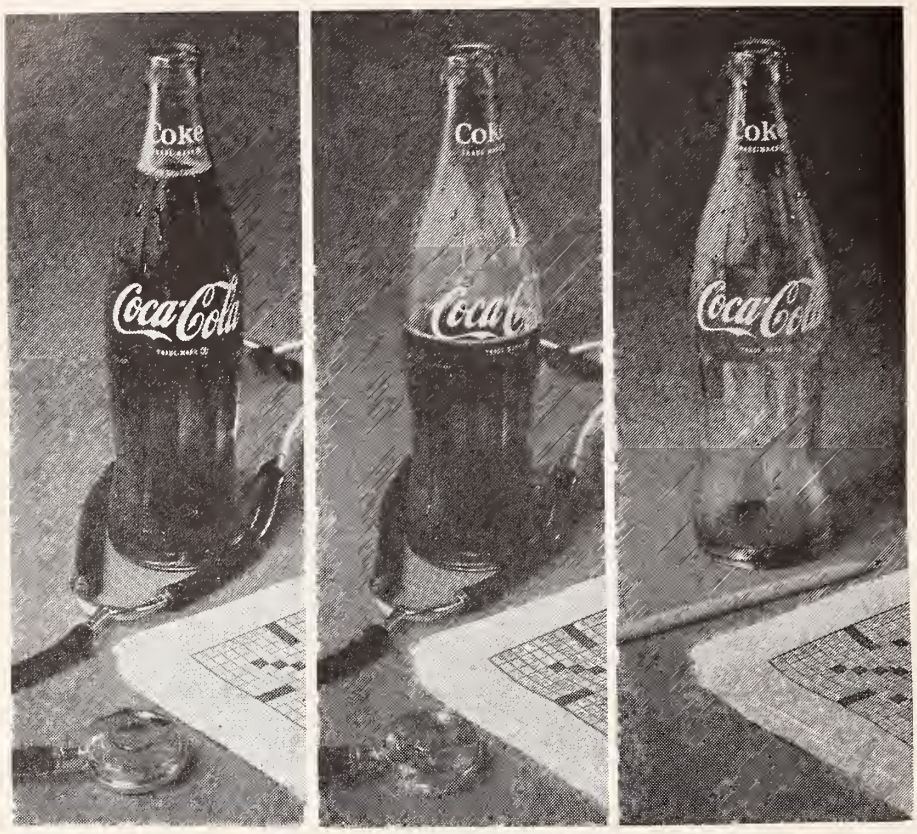
2. Be guided by the general rules of medical writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

3. Although the Editors try to catch inaccuracies, the ultimate responsibility is the author's.

4. Articles are accepted for publication only if they are contributed exclusively to this Journal. Ordinarily, contributors will be notified within 60 days if a manuscript is accepted for publication. Every effort will be made to return unused manuscripts.

5. The Journal reserves the right to edit all material.

6. Reprints will be supplied to the author at printing cost.



The meaningful pause. The energy it gives. The bright little lift. Coca-Cola with its never too sweet taste, refreshes best. Helps people meet the stress of the busy hours. This is why we say **things go better with Coke**
TRADE-MARK ®

Medical Center X-Ray and Clinical Laboratory

1313 North 2nd Street
Phoenix, Arizona
Phone ALpine 8-3484

DIAGNOSTIC X-RAY

CLINICAL PATHOLOGY **TISSUE PATHOLOGY**

ELECTROCARDIOGRAPHY **BASAL METABOLISM**

R. Lee Foster, M.D., F.A.C.R., F.A.C.P., Director *Martin L. List, M.D., Radiologist*

Diplomates of American Board of Radiology

Lorel A. Stapley, M.D., Consultant Pathologist



PRINCIPLES OF MEDICAL ETHICS

Roland F. Schoen, M.D.

Section 1. The principal objective of the medical profession is to render service to humanity with full respect for the dignity of man. Physicians should merit the confidence of patients entrusted to their care, rendering to each a full measure of service and devotion.

Section 2. Physicians should strive continually to improve medical knowledge and skill, and should make available to their patients and colleagues the benefits of their professional attainments.

Section I: Upon reading this section for the first time, one scans approximately forty words arranged into two declarative sentences, each containing a subject and a predicate, and each being semantically correct. There is no equivocation, condition or qualification. Two simple sentences; the first encompassing all living people in their entirety; the second limiting a concept of thought to a single individual.

The choice of words is incomparable. Is there a better phrase than "render service to"? Are there better words than "respect", "humanity", or "dignity of man"? The context of the words and the structure of the sentences stimulate the conception of medical services rendered because of compassion rather than for a thought of material gain; a medical service encompassing the entirety of all living human beings rather than small, limited or privileged groups or individuals. Respect for the dignity of man would separate and distinguish us from barbarians, cruelty, and brutality.

The second sentence clearly defines our course as physicians, abrogating pretense and ignorance, manifesting a total, zealous, humble dedication to our profession.

Section Two contains a mere twenty-five words arranged in the form of a compound sentence composed of two declarative statements. It lacks the blunt impact of the previous section, but it is more subtle in its content and in its choice of words. "Should" connotes, when stressed, an expression of moral obligation. "To make available" merely means "to put at the disposal of or make accessible to," while an "attainment" is a "mental acquirement."

Little more remains to be said, for our second principle becomes readily lucid. By the skillful use of the past particulate of a single word, the moral obligation of physicians referable to the current quality of their medical knowledge and skill is clearly demarcated, as is their moral obligation to share their mental acquirements not only with their own personal patients and the ills of these patients, but also with colleagues so that countless other patients and their ills may also benefit therefrom.

This has actually become an exercise in analysis and my imagination has been pleasantly stimulated. At first appraisal the principles of medical ethics appear to be a set of rules, a Table of Ten Commandments of the Medical Profession as it were, but as the final words are drafted different thoughts occur.

Many physicians cross the horizon of my memory; present acquaintances and colleagues whom I have known many years ago; my father; my grandfather; beloved instructors, and others. Now as I read the Principles of Medical Ethics an idea is conceived — each Section represents a facet of the complete physician! Each Section is a portion of the character and the personality of a Doctor of Medicine!

Perhaps we have stressed our Public Image at the expense of our image as individual physicians. I wonder what this Image, Model 1966, will be?



in chronic illness

B and C vitamins are part of therapy: An imbalance of water-soluble vitamins and chronic illness often go hand in hand. STRESSCAPS capsules, containing therapeutic quantities of vitamins B and C, are formulated to meet the increased metabolic demands of patients with physiologic stress. In chronic illness, as with many stress conditions, STRESSCAPS vitamins are therapy.



Stresscaps®

Stress Formula Vitamins Lederle

FOR PROFESSIONAL RECOMMENDATION ONLY

Each capsule contains:

Vitamin B_1 (as Thiamine Mononitrate)	10 mg
Vitamin B_2 (Riboflavin)	10 mg
Vitamin B_6 (Pyridoxine HCl)	2 mg
Vitamin B_{12} Crystalline	4 mcgm
Vitamin C (Ascorbic Acid)	300 mg
Niacinamide	100 mg
Calcium Pantothenate	20 mg

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York

Lederle

628-6—3614

NERVOUS PATIENT

William B. McGrath, M.D.

THERE is a cartoon in which a group of conventioning psychiatrists are singing, "For He's an adequate fellow." The nervous patient does manage to make any physician feel inadequate. If the physicial fails to anticipate this he will get hurt, or he may respond with that polite and toothy antagonism which the patient sometimes brings to the interview.

For reasons inherent in his illness, the patient may be under compulsion to prove that you and your remedies will be equally ineffectual. He is not aware — as you must be — that you personify all the important persons who have previously disappointed him. Whenever he pleaded for punishment and forgiveness and reconcilliation he was painfully misjudged by the dictators of whom you are perhaps the ultimate deputy.

The sullen adolescent is testing not you but authority in general. The sarcasm of the resentful woman cannot be aimed at her intimidating husband, so it is displaced onto you. To the immature adult you are not an individual; you are a faucet — or a computer to be programmed according to his narcissistic needs.

Neither does the nervous patient look for prompt improvement. Such would jeopardize his meager supply of solicitude, and he would just lose face. People have told him that he could help himself if he really wanted to. There is nothing you can say to him that he hasn't said to himself a hundred times. He has had a surfeit of platitudes and moralizings and banal advice. He is already on the defensive.

You have been taught to let him submit his story in his own words, at his own pace. Away from the analyst's couch this quickly becomes impracticable. Interruptions and scheduled hours will intervene. Or to the reticent individual your silence will seem inhospitable — just as other rejecting silences made him afraid to reveal his wordless anguish in the first place.

You must ask leading question. Leading where? The questions must, of course, lead the patient away from endless recapitulations and explanations of his complaints. Sympathy and encouragement are placebos, available without prescription. And the patient will not relinquish his neurosis just to repay you for your kindness.

Secondly and soon the inquiry must lead away from preoccupation with situational conflicts, at least in their surface manifestations. Let me give an illustration. A tearful and trembling woman reports that her perfectionist husband finds fault with everything she does. No matter how hard she tries, she cannot please him. Influenced by the family doctor's gentle chiding, the husband regrets his impatience and promises to desist from showing it.

This, so far, is the layman's notion of psychotherapy. But it ignores the man's private intrapsychic conflict. His irritability will break out again like boils. Didn't his perfectionism suggest some fundamental insecurity? Perhaps he cannot "afford" to seem happy with his marriage, for that would put to the test his uncertain capacity to be a loving and potent husband. Similarly, the wife's demoralization is but secondarily due to her husband's criticism. It is a needless penalty she pays for denying her own perfectly healthy anger.

Another example of chronic irritability may illustrate the searching quality of psychotherapy. A man (especially a professional man) needs a variety of cultural and recreational activities. His wife does not. She can be satisfied in the security of her household. This she cannot convey to him. He imagines that she must have to

pretend to be contented in what to him would be a miserable way of life, and he feels sorry for her. Whenever he pursues his independent interests, seemingly somehow at her expense, he feels an obscure guilt and a faint tension to hurry on home. Obviously now the wife's patience and redoubled devotion will just aggravate his irrational grouchiness. It is a maxim that man who is made to feel guilty — or, rather, who makes himself feel guilty — will react not apologetically but with rage.

The wife, in either of these cases, needs only the help of your educated perspective to be wonderfully tactful in putting her husband at ease.

Patients, unable to understand or help themselves, have come to expect misunderstanding and blame. They are afraid that their poor opinion of themselves will just be confirmed, sealed under the physician's labelling: neurotic, self-pitying, emotionally immature.

To the nervous patient the physician is always a surrogate conscience, a wiser and more objective superego, the only one to whom he can have recourse. The doctor's office, then, must be a sanctuary, a place of immunity from the prejudices and pretenses of the outside world.

UNIQUE TUCSON

FULLY-EQUIPPED

OFFICE RENTAL

Ready for immediate occupancy — an outstanding office availability in the long established, centrally-located Tucson Medical Square. This office is ideal for patient convenience. The air-conditioned office area is 1164 sq. ft., consisting of reception room, two examining rooms, a private office and fully-equipped laboratory. The office is completely furnished and decorated. These choice facilities can be yours now at an unusually reasonable rental rate. For additional information, contact:

CARLOS TOUCHE'

4431 E. Broadway Tucson, Arizona

Phone 327-6685

What Doctors Should Know About Guardian Check Cashing Service

Convenience for Customers . . .

Protection for merchants

Check cashing is easy and quick when a First National customer presents his Courtesy Card with its Guardian number to any of the more than 3,700 Arizona businessmen displaying the Guardian Check Cashing Service emblem.

Over 140,000 Arizonans use their Courtesy Cards to assure acceptance of their checks in any amount up to $50.00.

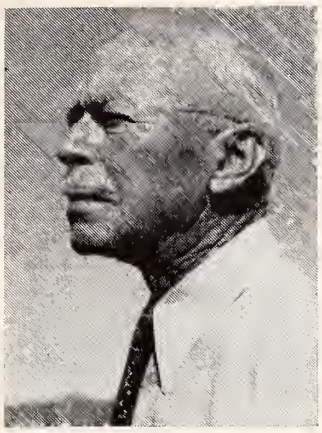
Guardian Check Cashing Service — another **exclusive** feature of First National Bank — makes good sense and good business throughout Arizona.



FIRST NATIONAL BANK OF ARIZONA

MEMBER F D I.C. • FEDERAL RESERVE SYSTEM

the bank where you come first!



EARLE WOOD PHILLIPS, M.D.
1883-1966

Born January 21, 1883. Died May 23, 1966. Was graduated from Cornell Medical School 1905. Entered U.S. Medical School, Washington, D.C., 1907. Received appointment to duty U.S.N. 1909. Discharged from Navy 1918 for physical disability incurred in line of duty.

Was retired as Liteutenant Commander.

Let his wife, Mary, give a brief summary of his outstanding medical accomplishments:

"In Butler, New York, on the farm of his father who bred and raised fine horses, he learned very young the feel of driving reins in his hands and how to sit a bareback horse. The pleasure and interest continued with him to the end of his life.

"In 1918 when he was retired from his war duty in the Navy he had been stationed on the West Coast. His Medical Examiner suggested Prescott, Arizona and Dr. John Flinn's sanatorium as a favorable residence for him, adding that Arizona was a place where he might live with his damaged lungs. Later, in the twenties, after he became Medical Director of Saint Luke's, finding beneficial exercise in riding horses again, he was undoubtedly influenced by Arizona's beautiful riding country in his choice of a new home.

"Dr. Phillips made his own survey of the Arizona pollen bearing plants as related to allergy. He had the good fortune to have for an interested friend, Professor J. J. Thornber of the Botany Department of the University of Arizona who helped when specimen identification was difficult.

"In 1942 the *American Journal of Obstetrics and Gynecology* published a report by Dr. Phillips on 'Allergic Shock Caused by Synapoidin.' It was 1949 before he concluded the research and published in the *Annals of Internal Medicine* his report on 'Clinical Evidence of Allergic Sensitivity to Gonadotropins in Allergic Women.' This article had the attention of his profession both here and abroad.

"In 1955 he contributed the chapter on Arizona to the book *Regional Allergy* by Charles Thomas.

"His publications were numerous extending over his long period of practice and included his studies of tuberculosis as well as those of allergy. He was chairman of the Committee on Tuberculosis Control in Arizona in 1938 and received the Award of Merit from the University of Arizona."

That Dr. Phillips seized the opportunity to study and develop the field of allergy was due to several factors not the least of which was that there was a need that was not being met for work in Arizona that would delineate the problems. His wife, Mary, a botanist, was of great help to him.

As Medical Director of Saint Luke's his office was on the grounds of the Sanatorium and he carried many hundreds of patients on desensitization programs, promoting the use of intradermal injections as providing superior results.

He was alert to changes in treatment of tuberculosis and recommended a surgical approach where necessary. Saint Luke's operated at capacity most of the time, with forty or more patients. It was surrounded for several blocks by dirt roads and the dust in the evenings during winter months was sometimes so thick one could see barely one hundred feet ahead. Yet many people recovered from pulmonary diseases and returned to active lives under his care.

In the pre-refrigeration days of the '20s and '30s patients were moved from Phoenix to Prescott for four months of the hot weather, and it

was during this period that Dr. Phillips published his observations on the effects of change of climate and altitude on tuberculosis patients.

In this day when medicine is becoming more and more institutionalized, the great inspiration of this man's life is that a dedicated student, working by himself, persistently, patiently, developing the truths of a pioneer science in a pioneer land, made great and lasting contributions to mankind. Medicine is peculiarly dependent upon personal dedication such as he exemplified, and upon truth seeking such as his, that enabled him to draw wise conclusions.

URSUS VICTOR PORTMANN, M.D.
1887-1966

Dr. Ursus Victor Portmann, internationally known Radiologist and specialist in Radiotherapy, died in Tucson on May 21, 1966. He was born in Jackson, Minnesota, on January 20, 1887. Dr. Portmann became a member of the Pima County Medical Society and of the Arizona Medical Association in 1955. He came to Tucson from Cleveland in 1953 to associate himself with the late Ludwig Lindberg, M.D., at the Tucson Tumor Clinic.

In 1913 he received his Doctorate in Medicine from Western Reserve University. In 1960 Dr. Portmann was awarded the honorary degree of Doctor of Science from Western Reserve.

He was a member of numerous organizations among which are: Cleveland Academy of Medicine, American Roentgen Ray Society, Radiological Society of North America, American College of Radiology, Honorary – Radiology Republic of Columbia, S.A., Rocky Mountain Radiology Society, American Medical Association, Arizona Medical Association, Pima County Medical Society. Dr. Portmann was Chief of Therapeutic Radiology, Cleveland Clinic in 1922. He served in France during World War I.

Dr. Portmann retired from active practice on January 1, 1958. He is survived by his wife, Jessie, of Tucson, and a son, Ralph, an executive of Proctor and Gamble, Inc., Belgium office.

VIRGINIA MURRAY COBB, M.D.
1902-1966

Dr. Virginia Murray Cobb was born in Italy December 6, 1902 and expired May 20, 1966. She received her M.D. degree from Columbia University College of Physicians and Surgeons in 1929, and served Internship and Residencies at the New York Hospital of Joint Diseases, Children's Hospital of San Francisco and Children's Hospital of the University of Pennsylvania. In 1932 she was Assistant in Pathology at the University of Geneva, Switzerland, and she received further postgraduate education at DTM & H in London, England, in 1933. She held memberships in the following: Pima County Medical Society, Tucson, since 1944; Monterey County Medical Society, California; King's County Medical Society and the Territorial Alaska Medical Association. In addition she was a member of the American Academy of Pediatrics, the Arizona Medical Association and the American Medical Association.

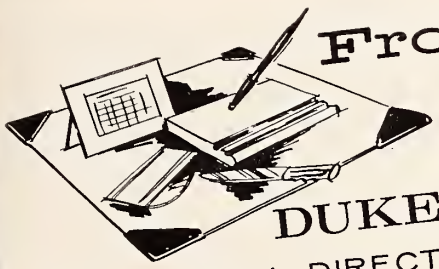
As early as 1956 Dr. Cobb began an effort to establish a Poisoning Control Program in Tucson, through the Arizona Chapter of the American Academy of Pediatrics and with the help of the Tucson Woman's Club.

She was one of two representatives from Pima County Medical Society to The Arizona Medical Association Committee on Poison Control, 1957-58, and when the Arizona Medical Association adopted a resolution (on April 13, 1957) pertaining to the establishment of a Poisoning Control Program, she was the first Chairman of the Association's Committee on Poisoning Control.

At the time of her death Dr. Cobb was Acting Medical Director of the Arizona Children's Colony.

Dr. Cobb is survived by her husband, Dr. Joseph H. Stickler; a son, John Cobb Stickler of Seoul, Korea; a daughter, Mrs. Mary (Barry) McCallion of Claremont, California; and a nephew, William Cobb, a philosophy lecturer at the University of Arizona.

Dr. Cobb was an untiring worker and completely devoted to the art of medicine particularly in the field of pediatrics. She will be sorely missed by the profession and by the community at large.



From The Desk Of

DUKE GASKINS, M.D.

MEDICAL DIRECTOR, HBA LIFE INSURANCE CO.

Doctor:

The thing I like most about being associated with HBA is the premium it puts on time — everyone's time.

I well recall how I used to resent anyone or anything that took me away from my patients, even for a few minutes.

Time is precious here, too! We haven't time to bother with lengthy claim forms and only once in a blue moon do we have to ask you to fill out a claim form (only five in 100 cases to be more exact).

But when we do, we'll appreciate receiving these claim forms back as soon as possible so we can issue the check.

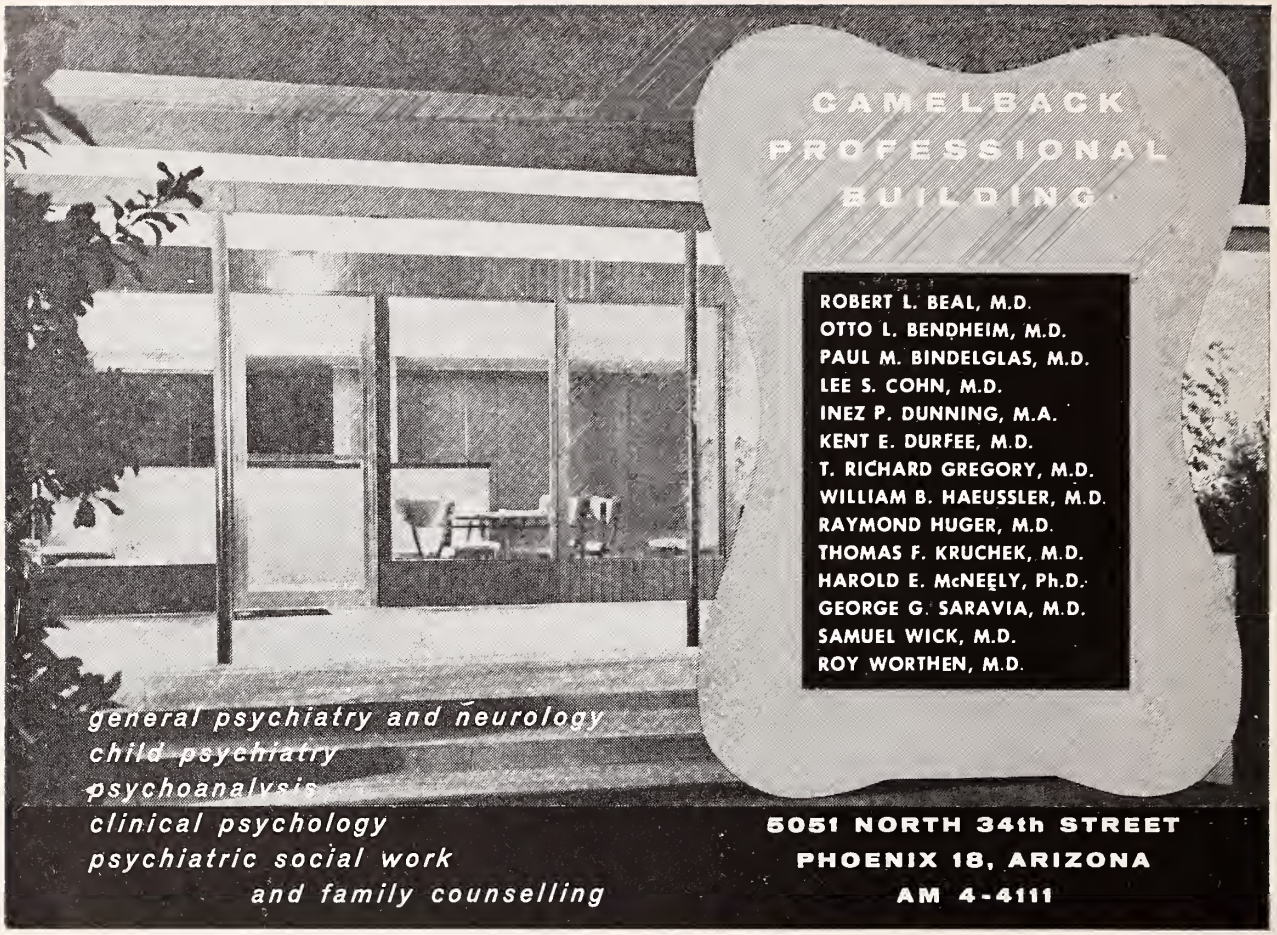
Fair enough?

Duke

THE HBA LIFE

INSURANCE COMPANY

GROWING WITH THE ELEVEN WESTERN STATES



THE DIAGNOSTIC LABORATORY

Complete Medical Laboratory Service, X-Ray Diagnosis
Radiation Therapy, Radioactive Isotopes



PATHOLOGISTS
Maurice Rosenthal, M.D.
George Scharf, M.D.
Seymour B. Silverman, M.D.
Bland Giddings, M.D.
Sidney H. Zuber, M.D.

RADIOLOGISTS
1130 E. McDowell Office — 258-1601
Marcy L. Sussman, M.D.
1901 E. Thomas Road Office — 274-3603
Edward L. Batts, M.D.
William S. Stone, M.D.
George A. Gentner, M.D.

Diplomates of the American Boards of PATHOLOGY and RADIOLOGY

1901 East Thomas Road • Phoenix, Arizona • Phone 264-2101

Dr. Wallace Reed prepared a letter which was read at a meeting of the Ad Hoc Committee on Federal Services. The letter is as follows. It was recommended that this letter be made available to all members of the Association.

"TO: MY PATIENTS
FROM: YOUR DOCTOR

"I rejoice with you in the measure of relief which Medicare affords participants in Part B ('Doctors' services'). As Under Secretary Wilbur J. Cohen says, 'As a result of this law, many of our aged will . . . be able to get the high-quality health care they need but heretofore could not afford. Physicians will no longer have to provide free care to so many of the aged, or to make a routine practice of treating the aged at reduced rates. And, most importantly, the dignity of the patient is protected. . . .'

"The Government has provided that each individual share in payment for his medical care. There are certain deductibles which must be met, as described in the booklet which has been sent to you by the Department of H. E. W. And in addition, as spelled out in the same booklet, the individual is responsible for the balance remaining after the Medicare insurance payment. This balance will most often amount to 20% of covered services. In requiring the patients to pay a portion of the bill, the Government has taken a page from the book of that famous American humanitarian, Tom Dooley, who wrote in *Edge of Tomorrow*: 'We always urged the villagers to pay us in barter for our medicines and for the treatment that we were giving. This was important for their own pride and was important for us, too.'

"I am willing to cooperate with the Department of H. E. W. in this praiseworthy effort to bring better medical care to a larger segment of our population. And I very much appreciate the fact that two methods of billing are permitted by the Medicare Act. This is to advise you that my choice is the first of the two alternatives mentioned in your booklet. This is described as the 'Payment to Patient.' The steps are these:

1. Doctors bills you.
2. You pay doctor, as in the past.
3. Doctor gives you a receipted bill.
4. You send in form and collect from Government whatever the Government allows.

"If there are any questions as to proper application of this method, please contact my office.

Sincerely yours,"



Now, now, Mrs. Forsythe, we've never lost a cold patient yet.

When she's experiencing acute discomfort from cold symptoms, it's small wonder the patient becomes distressed about her condition.

She will breathe easier when you prescribe Novahistine LP.

Novahistine LP is a long-acting decongestant that helps restore normal mucus secretion and ciliary activity—physiologic mechanisms which prevent infection of the respiratory tract. A dose of two tablets taken in the morning and repeated in the evening will usually keep air passages clear for 24 hours.

Use cautiously in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution patients who operate machinery or motor vehicles that drowsiness may result.

Each Novahistine LP tablet contains: phenylephrine hydrochloride, 25 mg., and chlorpheniramine maleate, 4 mg.

DOW PITMAN-MOORE Division of The Dow Chemical Company, Indianapolis

NOVAHISTINE® LP

For relief of nasal congestion.



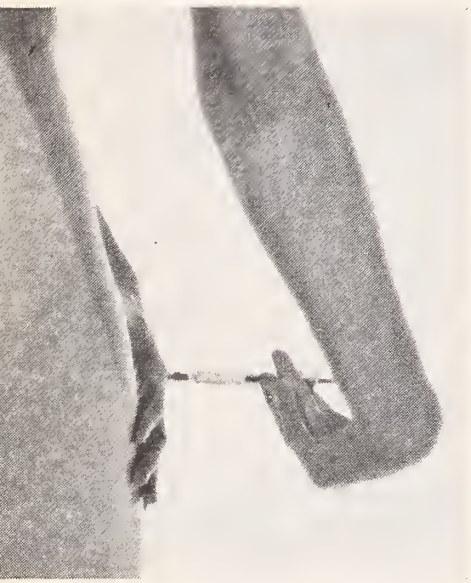
Saxon

New
low-cost tetracycline/antifungal therapy

for broad-spectrum activity
plus specific antifungal prophylaxis
at significant patient savings

Whenever tetracycline is indicated in these candidates for Candida

diabetic patients



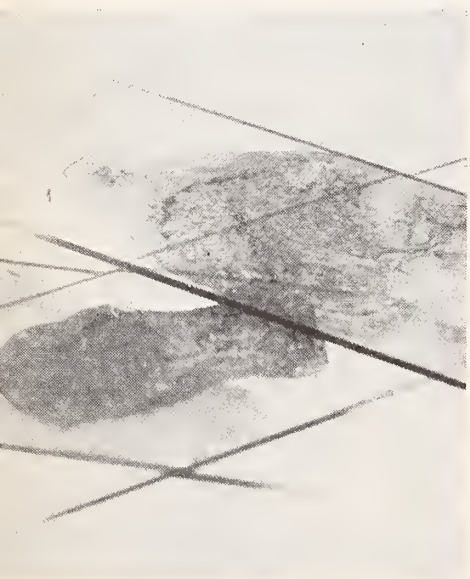
2. nonpregnant women with a history of recent or recurrent monilial vaginitis



3. elderly or debilitated patients



patients with a past history of moniliasis



5. patients on long-term tetracycline or corticosteroid therapy



BRISTOL THERAPEUTIC SUMMARY: For complete formation consult Official Package Circular. *Indicatio* Infections of respiratory, gastrointestinal and genitourin tracts and skin and soft tissues due to tetracycline-se tive organisms, in patients with increased susceptibi to monilial infections. *Contraindications:* The drug is c traindicated in patients hypersensitive to its compone *Warnings:* Photodynamic reactions have been produced tetracyclines. Natural and artificial sunlight should avoided during therapy. Stop treatment if skin di-com occurs. No cases of photosensitivity have been repor with Tetrex (tetracycline phosphate complex). With re impairment, systemic accumulation and hepatotoxicity m occur. In this situation, lower doses should be used. To staining and enamel hypoplasia may be induced dur tooth development (last trimester of pregnancy, neon period and childhood). *Precautions:* Bacterial superinf tion may occur. Infants may develop increased intracra pressure with bulging fontanels. In gonorrheal thera serologic tests for syphilis should be conducted initi and monthly for 3 months. *Adverse Reactions:* Gloss stomatitis, nausea, diarrhea, flatulence, proctitis, vagin dermatitis, and allergic reactions may occur. *Usual A Dosage:* 1 capsule *q.i.d.* Continue therapy for 10 days beta-hemolytic streptococcal infections. Administer hour before or 2 hours after meals. *Supply:* Capsules, b tles of 16. Each capsule contains tetracycline phosph complex equivalent to 250 mg. tetracycline HCl activ and 250,000 units of nystatin.

BRISTOL

BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York

Tetrex-F®

Each capsule contains tetracycline phosphate complex equivalent to tetracycline hydrochloride 250 mg. and nystatin 250,000 units

Tetrex-F is priced lower than most tetracycline-antifungal products.

"son pouvoir antiémétique est élevé"*

Vomiting:
In Geneva they have a word for it

In Geneva, too, Dramamine is a familiar word. Like physicians the world over, they know that 'its antiemetic potency* is high" ("son pouvoir antiémétique est élevé").

Nausea and vomiting caused by infection or simple functional gastrointestinal disturbances are quickly controlled by this classic antinauseant.

Usual Adult Dosage: One or two tablets every four hours as needed.

Precautions: Dramamine, notably nontoxic itself, may mask the symptoms of streptomycin toxicity. Patients should be cautioned against operating automobiles or dangerous machinery because of possible drowsiness.

*Neyroud, M.: Praxis 44:648-650 (July 14) 1955.

Research in the Service of Medicine SEARLE

relied on round the world ■

Dramamine®

brand of
dimenhydrinate

classic antinauseant

Ampuls (for intramuscular or intravenous use)
Supposicones® / Liquid / Tablets

Thanks to Dexamyl®

brand of
dextroamphetamine
sulfate and amobarbital

she can say "No thank you" to the crêpes suzette.

'Dexamyl' does more than most anorectics. Because it curbs appetite *and* lifts mood, 'Dexamyl' can encourage the discouraged dieter to stay on her diet.

The mood lift with 'Dexamyl' can make the difference between the success or failure of her diet plan.

Formulas: Each 'Dexamyl' Spansule® Capsule (brand of sustained release capsule) No. 1 contains 10 mg. of Dexedrine® (brand of dextroamphetamine sulfate) and 1 gr. of amobarbital, derivative of barbituric acid [Warning, may be habit forming]. Each 'Dexamyl' *Spansule* capsule No. 2 contains 15 mg. of Dexedrine (brand of dextroamphetamine sulfate) and 1½ gr. of amobarbital [Warning, may be habit forming].

Principal cautions and side effects: Use with caution in patients hypersensitive to sympathomimetics or barbiturates and in coronary or cardiovascular disease or severe hypertension. Insomnia, excitability and increased motor activity are infrequent and ordinarily mild.

Before prescribing, see SK&F product Prescribing Information.

Smith Kline & French Laboratories SK&F



About Community Health Services

By

John C. Foster, Executive Director

Last month we made some observations on the National Health Forum and outlined some of the recommendations of the National Commission on Community Health Services. This month we will complete the outline.

Before doing so, it might be well to comment on one item that came to light during the sessions. All of us concerned with the Medicare Law have stated that the aged portions of the law (Parts A and B of Title XVIII) will have less impact in the field of government intervention in the practice of medicine than Title XIX which sets up programs for the medically indigent. To prove the point, New York State has adopted a Title XIX program, which according to the State Health Commissioner, could apply to ⅓ of the entire population of the state. In fact, ⅓ of the New York State employees would be eligible for the "indigent care" benefits.

Leaving the above without comment, albeit tears, we progress to the Commission's recommendations.

I. **Accident Prevention:** Accident prevention is an integral part of comprehensive health service. Health leadership must increase its efforts to prevent accidental injuries, disabilities and death.

II. **Family Planning:** Both public and private health agencies should provide family planning services and research in human fertility.

III. **Urban Design and Health:** Those who control use of the land, transportation, and economic development must assume responsibility to plan for more effective use of space and for reduction of the emotional and physical hazards of high population density.

IV. **Education for Health:** Both the community and the citizen have their responsibilities. The community is responsible for informing and motivating its citizenry to utilize health services, at the same time avoiding quackery. The citizen is responsible for making use of available services according to his needs.

V. **Health Manpower:** To provide comprehensive health services in the coming decade will require intensive, planned and continuous efforts to recruit, educate and train manpower for the health team.

VI. **Hospital Costs and Care:** Further increases in hospital costs must not be accepted complacently. Vigorous and persistent action must be taken by all parties concerned to moderate the costs of hospital care without adverse effects on its quality.

VII. **Official State Health Agency:** Every state should have a single, official health agency with sufficient authority and funds to carry out its responsibilities, one of which would be to assure access of the complete range of health services to all communities in the state.

VIII. **The Volunteers:** The American tradition of voluntary citizen participation must be extended to develop and guide community health services.

IX. **Action Planning:** Planning is an action process and is basic to development and maintenance of quality community health services.

Occupational therapist guides patient in newly acquired hobby of making artificial flowers. All patients at Camelback Hospi are encouraged to participate in constructive hobbies as another integra part of their rehabilitation program, according to doctor's instructions. Hobbies may be pursued outdoors in the scenic recreation area or in the special hobby workshop in the hospi



Located in the heart of the beautiful Phoenix citrus area near picturesque Camelback Mountain, the hospital is dedicated exclusively to the treatment of psychiatric and psychosomatic disorders, including alcoholism.

APPROVED BY THE JOINT COMMISSION ON ACCREDITATION OF HOSPITALS; and THE AMERICAN PSYCHIATRIC ASSOCIATION

Camelback Hosp

5055 North 34t
AMhers
PHOENIX,
ARIZONA FOUNDATION FOR NEUROLOGY AND PS
A Non-Profit C

co–op.er.a.tion, co.op.er.a.tion, co.op.ēr.a.tion (kō–op'er–ā'shen), n. 1. a co–operating; joint effort the benefits of which are shared by all members.

UP TO $1,000 MONTHLY BENEFIT
NOW AVAILABLE
ON A STATEWIDE BASIS - MEANS STABILITY

Disability Insurance pays...not only when you're sick or injured...but also in "peace of mind" when you're well!
"The Only Known Substitute for Earning Power"

NATIONAL CASUALTY COMPANY
OF DETROIT, MICHIGAN

Arizona Representatives

PHOENIX ★ CHARLES A. de LEEUW
3424 NORTH CENTRAL AVENUE
(PHONE 266–2403)

TUCSON ★ RONALD E. DEITRICH
SUITE 9, PIMA PLAZA, 2030 E. BROADWAY
(PHONE 297-1158)

Approved and Recommended by the
MEDICAL ECONOMICS COMMITTEE AND THE COUNCIL
...SINCE 1953

HOBBY HORSE RANCH SCHOOL

A School For Exceptional Children

The Hobby Horse Ranch School is both home and school for a small group of children. It welcomes the child who is mentally retarded and physically handicapped as well as the backward child who suffers no physical handicap.

The Hobby Horse Ranch School is a branch of Fairview School in Fishkill, New York which was established in 1936.

Directors: Blanche C. Lightowler, B.A.
Matthew W. Lightowler

P.O.B. 44, Cortaro, Ariz.

PARAMUS COIN EXCHANGE

The East's Largest Coin Exchange

OFFERS U.S. GOLD FOR YOUR FUTURE
ALL BRILLIANT UNCIRCULATED

$20 Gold pieces		**$3 Gold pieces**	
Liberty	$ 54.95		$349.00
St. Gaudens	$ 54.95	**$2.50 Gold pieces**	
$10 Gold pieces		Liberty	$ 52.95
Liberty	$ 32.95	Indian	$ 32.95
Indian	$ 52.95	**$1 Gold pieces**	
$5 Gold pieces		Type 1	$ 49.95
Liberty	$ 23.95	Type 2	$250.00
Indian	$ 32.95	Type 3	$ 75.00

SETS

Liberty Gold Type Set	4 Coins	$159.95
Indian Gold Type Set	4 Coins	$169.95

ALL COINS IN CUSTOM PLASTIC CASES

U. S. SILVER DOLLARS	Single	$2.00
BRILLIANT	Roll	$39.95
UNCIRCULATED	Bag	$1695.00

Gold and Silver is Today's Best Investment

Paramus Coin Exchange **A.N.A. Member**
Bergen Mall Shopping Center
Paramus, N.J. 07652 **201-342,2600**

Gentlemen: Please ship the following:

NAME

ADDRESS

CITY STATE

BILL MY D.C. ACCT. #.....

BILL MY AMER. EXP. ACCT. #.....

For other coin values send for free catalogue!

Squaw Peak Sketches

Of Pithy Pioneer Physicians



by dry gulch jake

ITEM

Minutes of the meeting of the State Board of Health, Sept. 7, 1917.

Dr. J. B. Nelson, State Superintendent of Health reported on the matter of a well at Florence being used by Dr. Randall (County Superintendent of Health), as cess pool, thereby contaminating other wells in the vicinity, and a satisfactory adjustment of the matter by Dr. Randall who discontinued the use of the well.

Report of Dr. Nelson on his trip to Flagstaff to investigate an unsanitary cess pool used there by laundries, and the establishment of a new system to take the place of the unsanitary cess pools.

Dr. Nelson also reported his inspection of the Northern Normal School, their unsanitary method of taking care of sewage and read correspondence addressed to Dr. Manning, County Health Officer, suggesting that this method be replaced by septic tanks, and insisting that all diseases occurring in the dormitories be promptly reported. After discussion by the Board, it was recommended that the Secretary write to Dr. Manning, that if feasible to connect the sewage system of the Normal with that of the Flagstaff at an early date, the septic tanks would not be considered as a substitute.

Dr. Meserve's request for leave of absence, without pay from his position as Director of the State Laboratory, to enable him to serve in the Army, was granted without objection.

The appointment of Miss Jane Rider as Director of the Arizona State Laboratory, at the University of Arizona, with full pay, said appointment taking effect September 1, 1917 was made without objection, and the Secretary ordered to duly advise the President and the Chancellor of the University and Miss Rider of this appointment.

ITEM

A report on some of the work carried out by the Arizona State Laboratory is contained in a letter addressed to Dr. Looney, Superintendent of Health, August 24, 1916.

"Referring to my letter of August 11, Dr. Meserve was only in Tucson a week before returning to Douglas and in that time it was necessary for him to go to Nogales to inspect dairies at that place. He expects to be stationed in Tucson in about three weeks, for a couple of weeks and at that time I will go to Prescott and other towns in the Northern part of the State.

"We are working on a method for the microscopial analysis of milk advocated by the New York Agricultural Experimental Station and if our results are good I will be able to analyze the milk at the time of collection thus doing away with the necessity of shipping it to a laboratory at this time.

"We have just finished a very complete examination of the milk supply of Tucson and Nogales. The former has most of the dairymen producing a good grade of milk, but the latter without an exception were all bad. Dr. Gustetter, the local Health Officer, is working with the dairymen now to help them improve their dairies and method of milk production.

Signed: Jane Rider, Assistant"
John W. Kennedy, M.D.

Soyalac

SOLVES THE PROBLEM

for the infant who requires a milk-free diet!



- Soyalac satisfies! Baby is happy, mother is grateful, doctor is gratified.
- The nut-like taste is pleasing. Infants readily accept this hypo-allergenic formula that is completely fibre-free. An exclusive process results in a consistency much like milk.
- Soyalac is strikingly similar to mother's milk in composition and ease of assimilation. Clinical data furnish evidence of Soyalac's value in promoting normal growth and development.
- Excellent for regular infant feeding, too—and for growing children and adults.

Soyalac

Free Booklet and Samples

A request on your professional letterhead or prescription form will bring to you complete information and a supply of samples.

a product of

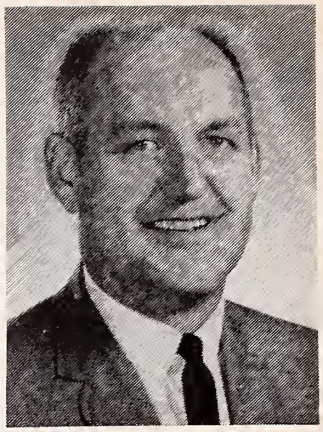
LOMA LINDA FOODS

MEDICAL PRODUCTS DIVISION

RIVERSIDE, CALIFORNIA

Mount Vernon, Ohio, U. S. A.

ArMPAC APPOINTS CANDIDATE SELECTION COMMITTEES



John F. Kahle, M.D., Chairman

At a recent ArMPAC Board of Directors meeting, Candidate Selection Committees were named for the First Congressional District of Arizona. These committee members are Drs. Richard Flynn, William Payne, Sherman Thorpe, and Mrs. Clare Johnson. Likewise Candidate Selection Committees were named for the Third Congressional District. As it involves such a large area, it was divided into a Northern and Southern Section. The members named to the Northern Section Committee are Walter Brazie, M.D., of Kingman; Arnold Dysterheft, M.D., of McNary; Ivan Kazan, M.D., of Page; Doyle Hansen, D.D.S., of Holbrook; Ray Enscore, M.D., of Prescott, and Eldon Bills, D.D.S., of Flagstaff. Dr. Eldon Bills is the chairman of this committee. The Southern Section Candidate Support Committee members are Sherman Thorpe, M.D., Mesa, Chairman; Paul W. Kliewer, M.D., of Wickenburg; James Grobe, M.D., of Phoenix; E. Blaine Brimley, D.D.S., of Phoenix, and Bill C. DeMoss, M.D., of Tolleson.

It was pointed out that the Third Congressional District is one of the top priority target areas in the upcoming campaign. Our ArMPAC memberships need to be increased, and we need to encourage more doctors and their wives to take a more active role in politics. Certainly the time has long since presented itself for doctors to assume their natural role of leaders in the political activities of their communities and our country. If the apathy continues, none of the even less professions will have to worry as we will all be wards of the benevolent Uncle in Washington.

Considerable discussion again occurred concerning the bi-partisan aspect of our ArMPAC activities. The ArMPAC Board of Directors agrees that we should select the candidates that we support for the congressional seats from Arizona on the basis of the candidate's ability and his desire to adequately represent the entire constituency of the State so that we as doctors and citizens will feel that we have proper and adequate representation in Washington.

NEW FEDERAL SERVICES COMMITTEE PROGRAM STARTED

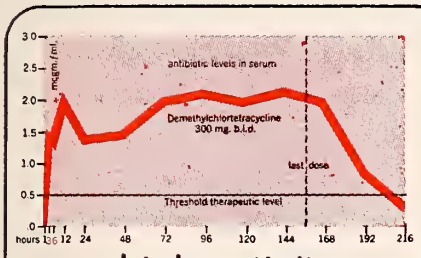
At the July 10, 1966, Board of Directors meeting it was decided that Mr. Bruce E. Robinson, Assistant Executive Secretary, will staff the new Federal Services Committee, as authorized by Resolution No. 12 passed by the House of Delegates on April 30, 1966.

One of the first items will be a visitation by Mr. Robinson to as many members in the state as possible to discuss with you the Medicare Law and other medical legislation. If he does not have the answers to your questions, he will get them for you.



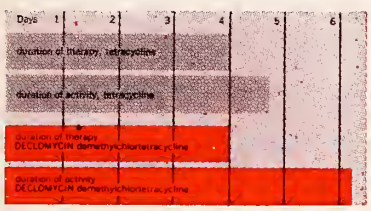
greater potency
lower mg intake per day
600 mg versus 1,000 mg

in G.U. infections
broad-spectrum performance

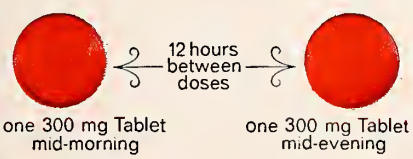


high activity

From Sweeney, W. M., Dornbush, A. C., and Hardy, S. M.: Amer. J. Med. Sci. 243 296 (Mar.) 1962



1-2 "extra" days' activity
after the last dose to protect against relapse



one 300 mg Tablet
mid-morning

one 300 mg Tablet
mid-evening

It's made for b.i.d.

DECLOMYCIN®
DEMETHYLCHLORTETRACYCLINE

Effective in a wide range of everyday infections—respiratory, urinary tract and others—in the young and aged—the acutely or chronically ill—when the offending organisms are tetracycline-sensitive.

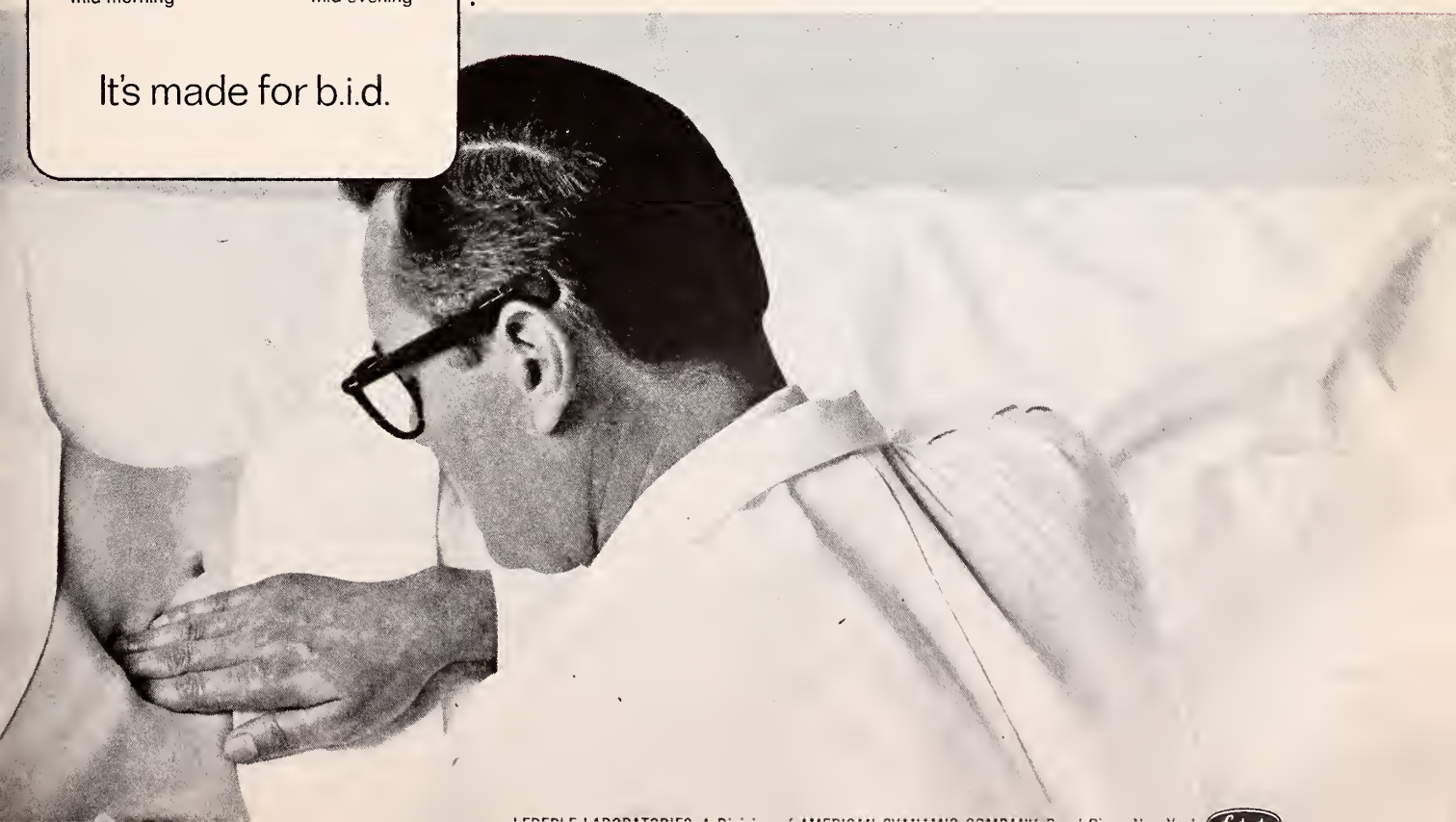
Contraindication—History of hypersensitivity to demethylchlortetracycline.

Warning—In renal impairment, usual doses may lead to excessive systemic accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort.

Precautions and Side Effects—Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. Use of demethylchlortetracycline during tooth development (last trimester of pregnancy, neonatal period and early childhood) may cause discoloration of the teeth (yellow-grey-brownish). This effect occurs mostly during long-term use but has also been observed in short treatment courses. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment. Side reactions include glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and dermatitis. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Anaphylactoid reactions have been reported.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products.

Capsules: 150 mg; *Tablets:* film coated, 300 mg, 150 mg, and 75 mg of demethylchlortetracycline HCl.



LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Physicians' Directory

ArMA

DIRECTORY AND CLASSIFIED RATES

- *Professional card and classified space is available at $3.50 for the first fifty words or less; 5c for each additional word thereafter.*

- *Mail copy to Business Manager, ARIZona MEDICINE, Post Office Box 128, Scottsdale, Arizona 85252, not later than the tenth of the month preceding publication.*

ALLERGY

JOHN F. McKENNA, M.D.
Associate Fellow, American College of Allergists

PARK CENTRAL NORTH
Medical Building
555 West Catalina
Phoenix, Arizona 85013
Phone 264-1381

DANIEL H. GOODMAN, M.D., F.A.C.P.
Diplomate

American Board of Internal Medicine
and Subspecialty Board of Allegry

31 W. Camelback Road
Phoenix
277-3337

500 W. 10th Place
Mesa
969-3966

HOWARD M. PURCELL, JR., M.D.
JAMES A. SMIDT, M.D.

ALLERGY OF CHILDREN

American Board of Pediatrics
American College of Allergists

322 W. McDowell Rd. PHOENIX, ARIZONA
AL 2-9731

ROBERT HEALY STEVENS, M.D.

Fellow American College Chest Physicians
Allergy and Internal Medicine

The Medical Center
1313 N. 2nd Street
Phoenix 4, Arizona

DERMATOLOGY

GEORGE K. ROGERS, M.D.

DERMATOLOGY

Diplomate of American Board of
Dermatology and Syphilology

Phone ALpine 3-5264
105 W. McDowell Road Phoenix, Arizona

ONCOLOGY

JAMES M. OVENS, M.D.
F.A.C.S. F.I.C.S.

Diplomate American Board of Surgery
Cancer and Tumor Surgery
X-ray and Radium Therapy

333 W. Thomas Road Phone 279-7301
Phoenix 13, Arizona

ORTHOPEDIC SURGERY

THE ORTHOPEDIC CLINIC
ORTHOPEDIC SURGERY

W. A. Bishop, Jr., M.D., F.A.C.S.* — A. L. Swenson, M.D. F.A.C.S.* — Ray Fife, M.D., F.A.C.S.* — Sidney L. Stovall, M.D. F.A.C.S.* — Thomas H. Taber, Jr., M.D., F.A.C.S.*

Robert A. Johnson, M.D.* — Paul E. Palmer, M.D.*

*Diplomates of the American Board of Orthopedic Surgery

2620 N. 3rd Street — Phoenix, Arizona — CR 7-6211

Physicians' Directory

PATHOLOGY

LOUIS HIRSCH, M.D.
RALPH H. FULLER, M.D.
WILLIAM M. HINDMAN, M.D.
EDWARD A. BRUCKER, M.D.
ARTHUR D. SILVER, M.D.

Diplomates American Board of Pathology
Clinical Pathology — Pathologic Anatomy

1641 N. Tucson Blvd.
Tucson, Arizona

PSYCHIATRY

LEO RUBINOW, M.D.
PSYCHIATRY
AM 6-0630

224 E. Thomas Rd. Phoenix, Arizona

RADIOLOGY

R. LEE FOSTER, M.D., F.A.C.R., F.A.C.P.
MARTIN L. LIST, M.D., Radiologist
Diplomates of American Board of Radiology
Diagnostic Roentgenology

1313 N. Second St.
Phone ALpine 8-3484
Phoenix, Arizona

MARCY L. SUSSMAN, M.D., F.A.C.R.
Diplomate of American Board of Radiology

DIAGNOSTIC RADIOLOGY
THERAPEUTIC RADIOLOGY
RADIOISOTOPES

1130 E. McDowell Rd.
Phoenix, Arizona
ALpine 8-1601

540 Wells Fargo
Scottsdale, Arizona
WHitney 5-3959

This Space
Available for
Professional Card
Listing

Pharmacy Directory

Fairmont Pharmacy
3231 East McDowell Road Phoenix, Arizona

PRESCRIPTIONS — DRUGS — COSMETICS — FOUNTAIN

BRidge 5-5719 FREE DELIVERY

In Scottsdale call
Lute's Scottsdale Pharmacy
For
PRESCRIPTIONS
WH 5-8420 — WH 5-8429
Next to the 1st National Bank

This Space
Available



Pharmacy Directory

Serving Arizona
Health Needs
Since 1908

Ryan-Evans
DRUG STORES

Phoenix - Tucson - Scottsdale - Mesa - Tempe
Maryvale - Glendale - Westown - Sunnyslope
Paradise Hills - Carefree - Apache Junction
Globe - Miami - Casa Grande - Wickenburg

Classified

DOCTOR'S CENTRAL DIRECTORY

Helen M. Barrasso, R. N., Director
For Emergencies or in Absence of Your Doctor

CALL EA 7-7471

At Your Service 24 Hours Daily

2807 East Speedway Tucson, Arizona

"Established 1932"

DANNY T. SEIVERT INSURANCE

Malpractice & Non-Cancelable Disability with Guaranteed Rates

Professional Programs for Professional Men

Del Webb's TowneHouse — Suite 1700
100 W. Clarendon — Phoenix
Telephone 277-1487

Classified

Private practice available for Board certified or Board eligible Internist at Cottonwood, [illegible] acilities available, plus [illegible] come of approximate- [illegible] year. Any other necessary information please contact Roland W. Wilpitz, Administrator, Marcus J. Lawrence Memorial Hospital, P. O. Box 548, Cottonwood, Arizona 86326.

Opportunity for General Practitioner in St. Johns, Arizona. County seat of Apache County with at least 3000 people in the trade area. Large fully equipped office facilities, plus X-ray, laboratory and emergency rooms. Results of Sears Foundation Economic Survey available. Contact Medical Service Committee, P. O. Box 296, St. Johns, Arizona.

Situation Wanted: Board Certified General Surgeon desires to re-locate to Arizona; age 40 yrs.; married with family; no objection to limited GP; available for personal interview for mutual evaluation. Reply Box 64-3, Box 128, Scottsdale, Ariz.

ATTENTION: Immediate opening for physician interested in Group General Practice in Arizona. New clinic and hospital facilities. No investment or equipment necessary. Industrial connection allows immediate salary. Will accept draft eligible physician. Reply: Drawer M., Miami, Arizona.

Psychiatric Residencies: Northern California Mental Health Center. Two hours San Francisco; vacation area; warm dry summer days, cool nights; close to Pacific beaches. Three-year accredited program; broad training, research and community psychiatry orientation; 1965 APA Achievement Award. Flexible third year, wide variety affiliations. Housing. Starting salaries to $10,440 depending upon alternate plans. Apply: Chief of Professional Education, Mendocino State Hospital, Talmage, California.

Arizona Medicine

JOURNAL OF ARIZONA MEDICAL ASSOCIATION
MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO

SEPTEMBER 1966
VOL. 23, NO. 9

FEATURES:

OBSERVATIONS ON TRIBE MIMEAE (PENICILLIN-RESISTANT) ORGANISMS 651
Maurice Rosenthal, M.D.
Cloyd Hendrickson, B.S.

DIRECT BILLING UNDER MEDICARE 691



U.C. MEDICAL CENTER LIBRARY
SEP 30 1966
San Francisco 94122

a sea of trouble for pollen-sensitive patients



Artist's depiction of Dwarf Ragweed
(Ambrosia elatior L.) and pollen

Benadryl®

(diphenhydramine hydrochloride)

PARKE-DAVIS

for control of allergic distress

The pink capsule with the white band is a trademark of Parke, Davis & Company.



- *antihistaminic action* relieves sneezing, nasal congestion, pruritus, and lacrimation
- *antispasmodic action* alleviates bronchial and gastrointestinal spasm.

Precautions: Persons who have become drowsy on this or other antihistamine-containing drugs, or whose tolerance is not known, should not drive vehicles or engage in other activities requiring keen response while using this product. Hypnotics, sedatives, or tranquilizers if used with BENADRYL should be prescribed with caution because of possible additive effect. Diphenhydramine has an atropine-like action which should be considered when prescribing BENADRYL.
Side Effects: Side reactions, commonly associated with antihistaminic therapy and generally mild, may affect the nervous, gastrointestinal, and cardiovascular systems. Most frequent reactions are drowsiness, dizziness, dryness of the mouth, nausea, and nervousness. BENADRYL is available in Kapseals® of 50 mg. and Capsules of 25 mg.

PARKE-DAVIS

1866 1966 100th ANNIVERSARY

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

00566

Lutrexin®

HW&D BRAND OF LUTUTRIN

3000 UNIT TABLETS

IN THE TREATMENT OF FUNCTIONAL DYSMENORRHEA

ND SELECTED CASES OF PREMATURE LABOR AND 2ND

AND 3RD TRIMESTER THREATENED ABORTION

In controlling abnormal uterine activity, LUTREXIN, the non-steroid "uterine relaxing factor" has been found to be the drug of choice by many clinicians.

No side effects have been reported, even when massive doses (25 tablets per day) were administered.

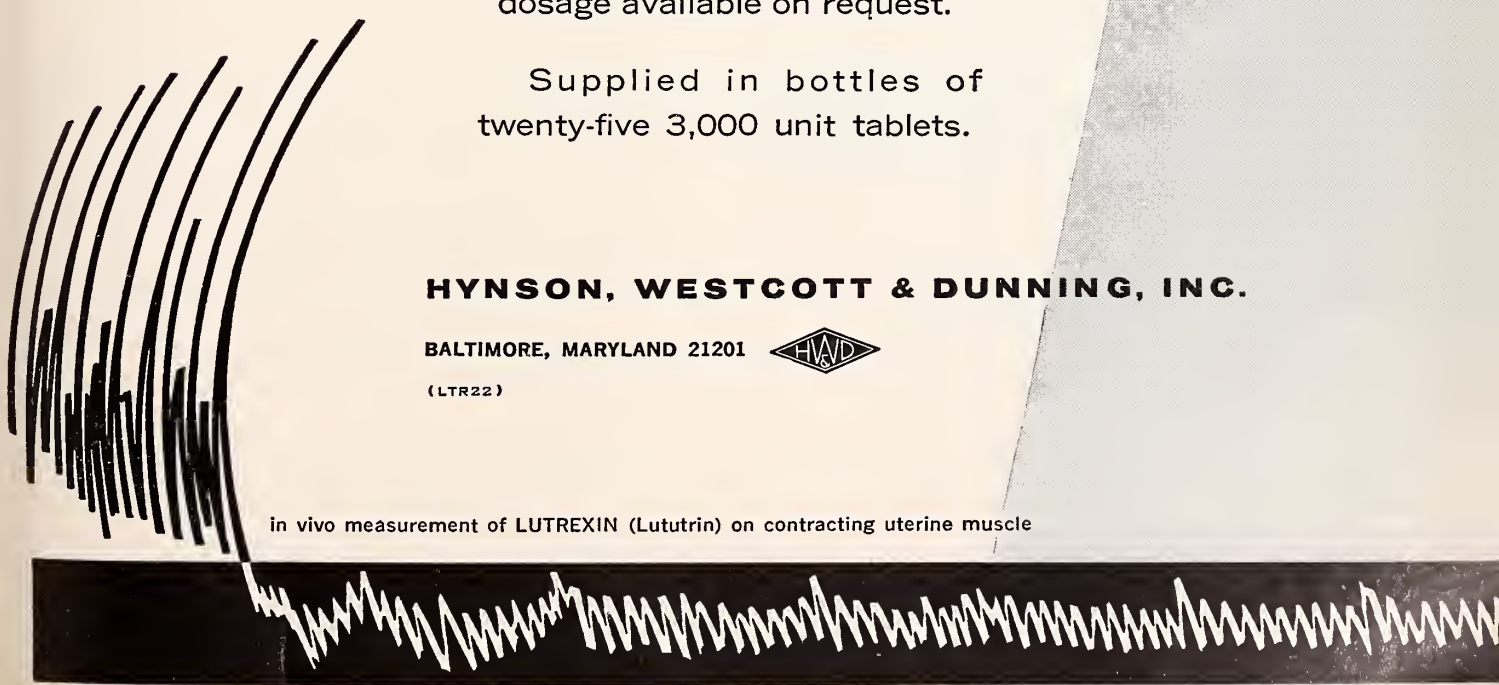
Literature on indications and dosage available on request.

Supplied in bottles of twenty-five 3,000 unit tablets.

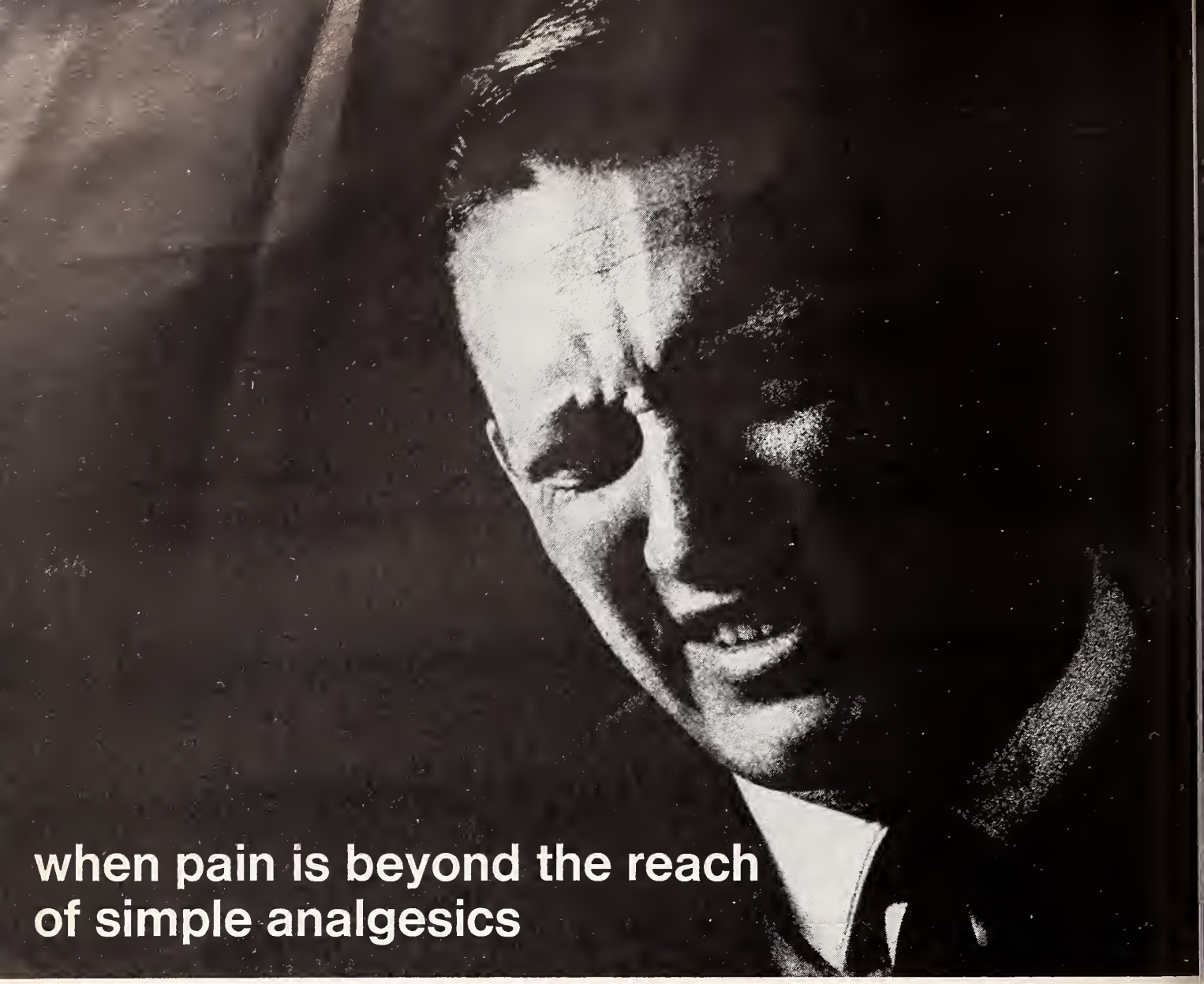
HYNSON, WESTCOTT & DUNNING, INC.

BALTIMORE, MARYLAND 21201

(LTR22)



in vivo measurement of LUTREXIN (Lututrin) on contracting uterine muscle



when pain is beyond the reach of simple analgesics

In the management of mild to moderate pain, give your patients comprehensive relief. TRANCO-GESIC extends the range of usefulness of aspirin by dimming pain perception—and *also* reducing mental and muscle tension.

TRANCO-GESIC®

tablets

chlormezanone 100 mg. with aspirin 300 mg.

subdues the major contributors to pain:

- pain perception
- mental tension
- muscle tension-spasm

TRANCO-GESIC is so well tolerated it can be prescribed for anyone who can take aspirin. It is non-narcotic, and free from dangers of addiction, habituation, or dependence. TRANCO-GESIC is effective in all types of mild and moderate pain. Of 862 patients who were treated with chlormezanone and aspirin for various disorders, 88% reported excellent or good pain relief.[1]

Side effects have been minor. Occasionally gastric distress, weakness, sedation or dizziness occur. Reversible cholestatic jaundice has been reported on rare occasions. However, in 4,653 patients treated with chlormezanone, 97.7% had *no* side effects.[1] *Contraindication:* just one: sensitivity to aspirin. *Dosage:* Adults, usually 2 tablets three or four times daily. Children (from 5 to 12 years), 1 tablet three or four times daily.

1. Collective studies, Department of Medical Research, Winthrop Laboratories.

Winthrop WINTHROP LABORATORIES, NEW YORK, N. Y. 10016

Arizona Medicine

JOURNAL OF ARIZONA MEDICAL ASSOCIATION

MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO

September 1966
Vol. 23, No. 9

Table of Contents

ARIZONA MEDICAL ASSOCIATION REPORTS

BOARD OF DIRECTORS – July 10, 1966 639
MEDICAL ECONOMICS COMMITTEE – July 17, 1966 644

ORIGINAL ARTICLES

OBSERVATIONS ON TRIBE MIMEAE (PENICILLIN-RESISTANT) ORGANISMS 651
Maurice Rosenthal, M.D.
Cloyd Hendrickson, B.S.

PRINCIPLES OF MANAGEMENT OF CARDIORESPIRATORY FAILURE 655
Thomas L. Petty, M.D.
Bernard E. Levine, M.D.
D. Boyd Bigelow, M.D.

PRESIDENT'S PAGE

A MATTER OF DISCIPLINE AND MORALE 667
Paul B. Jarrett, M.D.

DEAN'S PAGE

A TEACHING HOSPITAL – II 671
Merlin K. DuVal, Jr., M.D.

EDITOR'S PAGE

IDENTI-CODE 673
Roland F. Schoen, M.D.

EDITORIALS

MEDICAL ETHICS (A CONTINUATION) 677
John W. Kennedy, M.D.

IN MEMORIAM

DONALD E. NELSON, M.D. 685

FEDERAL MEDICAL PROGRAMS

DIRECT BILLING UNDER MEDICARE 691

CORRESPONDENCE 693

SQUAW PEAK SKETCHES 697

TOPICS OF CURRENT MEDICAL INTEREST

BOARD OF MEDICAL EXAMINERS – NEW LICENCIATES 701

FUTURE MEDICAL MEETINGS

ELEVENTH ANNUAL REUNION OF THE MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO 705

DIRECTORY

OFFICERS AND COMMITTEES 638
MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO 638
SOCIEDAD MEDICA DE ESTADOS UNIDOS DE NORTE AMERICA Y MEXICO 638
WOMAN'S AUXILIARY 638
INDEX TO ADVERTISERS Inside Back Cover

Published monthly by The Arizona Medical Association, Inc., with offices at 4601 N. Scottsdale Rd., Suite 201, Scottsdale, Arizona 85251. Subscription $5 a year, single copy 50 cents. Second class postage paid at Scottsdale, Arizona, and at additional mailing offices.


SAXON

A common cold! I thought everything was a "virus" these days.

Although he'd prefer a more exotic name for it, you know he's suffering from an ordinary, old common cold. And, he's congested. He'll breathe easier when you prescribe Novahistine LP.

Two long-acting tablets in the morning and two in the evening will provide around-the-clock relief by helping to keep congested air passages clear, thus enabling your cold patient to enjoy normal and free breathing. This action of long-acting Novahistine LP helps restore normal mucus secretion and ciliary activity—physiologic defenses against infection of the respiratory tract.

Use cautiously in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Tell patients who operate machinery or motor vehicles that drowsiness may result.

Each Novahistine LP tablet contains: phenylephrine hydrochloride, 25 mg., and chlorpheniramine maleate, 4 mg.

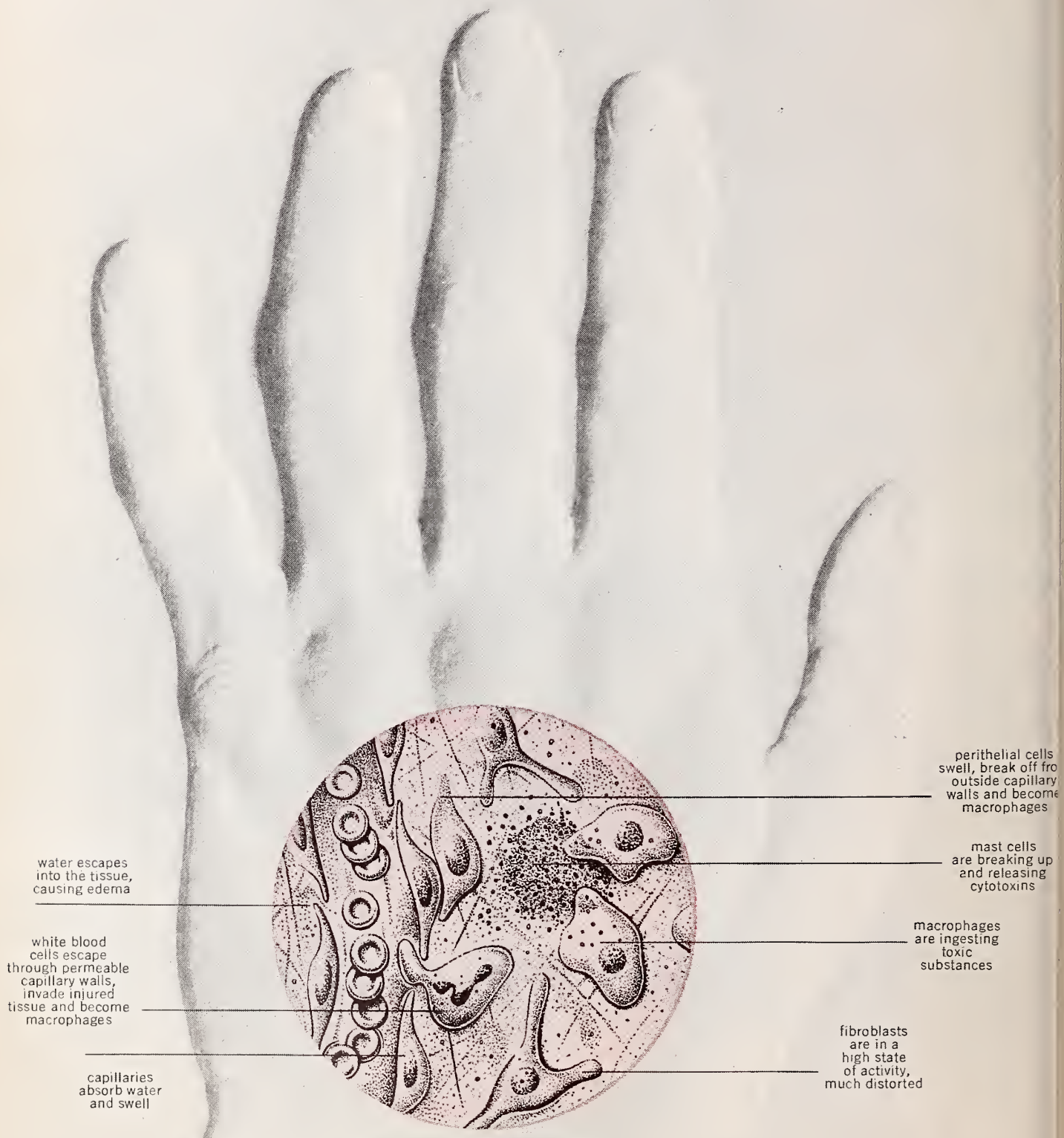
NOVAHISTINE® LP

For relief of nasal congestion.

DOW **PITMAN-MOORE** Division of The Dow Chemical Company, Indianapolis



Cinemicrography* of living tissue shows that Synalar works at the cellular level to stop the inflammatory chain reaction



Inflammatory reaction after injury

*A New View of Corticosteriod Action in Inflammatory Dermatoses
A 16 mm. film utilizing time-phase cinemicrographic techniques. Available for showing on request to Syntex Laboratories.

In contact dermatitis

Synalar®

(fluocinolone acetonide)

stabilizes cell and capillary walls
protects against the chemical impact of cytotoxins

interrupts the chain reaction of destructive changes at the cellular level

permits inactivation, absorption and transportation of toxins away from the injured area by natural processes...edema is absorbed and cells return to normal size, shape, and activity

In inflammatory dermatoses choose a steroid synthesized specifically for topical use. Synalar (fluocinolone acetonide) provides therapeutic results often comparable to those of systemic and intralesional corticosteroids with fewer hazards.[1-3]

when complicated by infection

neo-synalar®

(fluocinolone acetonide-neomycin sulfate cream)

For initiation of therapy: Cream 0.025%, 5 and 15 Gm. tubes, 425 Gm. jars; **for emollient effect:** Ointment 0.025%, 15 Gm. tubes; **for maintenance therapy:** Cream 0.01%, 15 Gm. tubes, 45 Gm. tubes, 120 Gm. jars; **for intertriginous or hairy sites:** Solution 0.01%, 20 cc. and 60 cc. plastic squeeze bottles; **for infected inflammatory dermatoses:** Neo-Synalar® Cream (0.025% fluocinolone acetonide, neomycin sulfate, equivalent to 0.35% neomycin base), 5 and 15 Gm. tubes.
Contraindications: Tuberculous, fungal, and most viral lesions of the skin, (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use. Contraindicated in individuals with a history of hypersensitivity to any of its components. **Precautions:** Synalar preparations are virtually nonsensitizing and nonirritating. However, the solution may produce burning or stinging when applied to denuded or fissured areas. In some patients with dry lesions, the solution may increase dryness, scaling or itching. The neomycin in Neo-Synalar Cream rarely produces allergic reactions. Prolonged use of any antibiotic may result in overgrowth of nonsusceptible organisms; if this occurs, appropriate therapy should be instituted. Where severe local infection or systemic infection exists, the use of systemic antibiotics should be considered, based on susceptibility testing. While topical steroids have not been reported to have an adverse effect on pregnancy, the safety of their use on pregnant females has not absolutely been established. Therefore, they should not be used extensively on pregnant patients, in large amounts, or for prolonged periods of time. **Side Effects:** Side effects are not ordinarily encountered with topically applied corticosteroids. As with all drugs, however, a few patients may react unfavorably to Synalar under certain conditions.

References: 1. Kanee, B.: Canad Med Ass J 88:999 (May 18) 1963. 2. Scholtz, J. R.: Calf Med 95:224 (Oct.) 1961. 3. Jansen, G. T., Dillaha, C. J., and Honeycutt, W. M.: Arch Derm 92:283 (Sept.) 1965.

fluocinolone acetonide—an original steroid from

SYNTEX

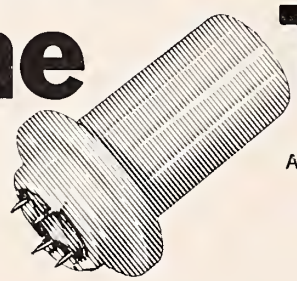
LABORATORIES INC., PALO ALTO, CALIF.

what time is it?

For the past
two years
there's been
one new case
of active tuberculosis
reported for every
four thousand
of U.S. population.

it's time to tine.

Tuberculin, Tine Test



Lederle

Available in 5's and 25's.
Order now
from your pharmacist
or your Lederle
representative.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York

414-6—4046

summer 1966

DORSEY Season

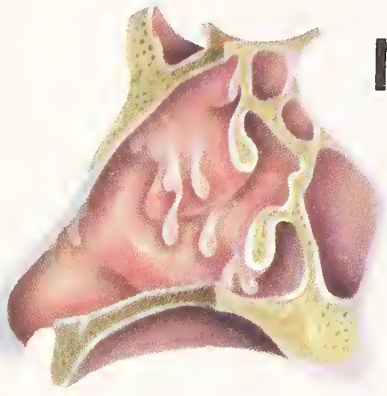
A journal within a journal published quarterly in the interests of better medicine by Dorsey Laboratories, a division of The Wander Company, Lincoln, Nebraska. Address communications to Raymond C. Pogge, M.D., Director of Medicine.



this issue: emergency anesthesia and the common cold

When emergency anesthesia is complicated by the common cold

Barry Belonsky, M.D., F.A.C.A.
Staff Anesthesiologist, Hospital of The Albert Einstein College of Medicine, New York City



Medical facilities are often presented with unfamiliar patients who have unknown health histories. This is particularly true in emergency situations that arise due to accidents or acute illnesses. These cases may need prompt care requiring anesthesia, and if they involve colds, nasal allergies or other upper respiratory infections, can account for many complications which make up a major hazard during emergency anesthesia.

Administration of general anesthesia to a patient with a cold or upper respiratory infection is a hazardous undertaking. It should be avoided if at all possible. Indeed, the presence of U.R.I. is good reason for postponement of elective surgery.[1] In emergency surgery, regional or local block should be considered, but if general anesthesia is mandatory, it should be approached with utmost caution.

Since the attitude of "emergency surgery — hurry" has been replaced by "emergency surgery — watch out",[2] a knowledge of the complications is a great help in preventing them. Here is a brief outline of the problems involved and their treatment. Prevention of the complications is discussed later.

Complications during the induction of anesthesia

Most of the complications are a direct result of secretions and some a result of accompanying secondary infection. For example, *airway obstruction* due to excessive secretions occurs very commonly and is the direct effect of the cold. Respiratory exchange may be obstructed at any time during anesthesia because of excessive secretions, but is most likely to occur during induction. Suction apparatus must be available to overcome this.[3]

Excess secretions which stimulate and irritate the epiglottis and vocal chords can cause *laryngeal stridor and obstruction*. This can lead to complete laryngeal closure with resultant anoxia and death.

Bronchospasm and laryngospasm can result fr secretions penetrating the bronchi and bronchio In laryngospasm, there are both inspiratory and piratory stridor and difficulty in inflating the ch in bronchospasm there is an expiratory wheeze, not as much difficulty in inflation, although so resistance may be felt. Stridor is due to partial complete closure of the vocal cords in spasm and "crowing" sound is almost pathognomonic.

Secretions obstruct the nasal airways. This produ *difficulty in ventilation* through the mouth until patient is deep enough to place an oral airway. intravenous agent can be given to facilitate the duction of anesthesia.

Difficulties can arise if intubation is performed ventilate the patient. For example, teeth can broken by too vigorous attempts at intubation, the intubation itself may be technically difficult to secretions obstructing the view of the glottis. T postoperative sequelae of intubation ranges fr mild laryngitis to pneumonia with atelectasis, a are seen far more commonly in patients suffer from colds than in normal patients.



Successive stages of laryngospasm which produce the ar acteristic stridor or "crowing" sound.



Progression of bronchioles into bronchospasm.

Complications during the maintenance of anesthesia *Bronchospasm* can occur in an untubated patient due to secretions entering the bronchial tree from above, and acting as an irritant to the bronchi and bronchioles. Secretions accumulate quickly and the patient has to be suctioned continually. The whole cycle of coughing, bucking, laryngospasm and bronchospasm may ensue. The difficult decision here is whether it is better to suction the patient continually or to use an endotracheal tube which protects the cords and bronchi but introduces the risk of attendant complications.

Postoperative complications Postoperatively, complications can be more serious than even the intraanesthesia complications, and occur much more frequently in a patient who has been intubated.[4]

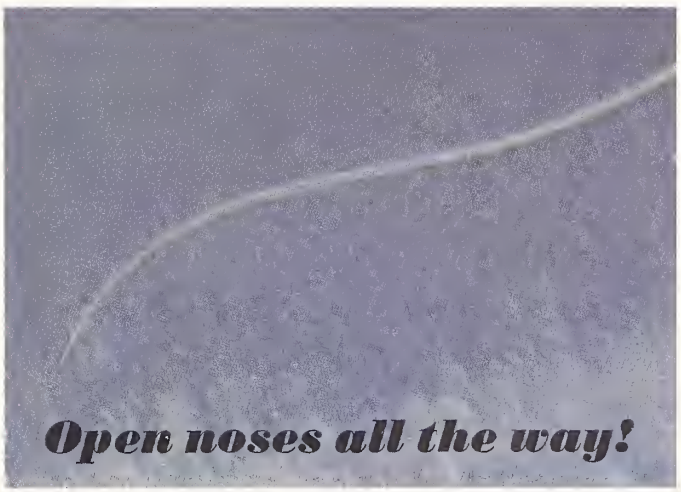
Sore throat and pharyngitis can result both from the preoperative upper respiratory infection and from the drying of the mucous membranes which occurs during anesthesia.

Tracheitis and bronchitis often result from secretions trickling down the tracheobronchial tree.

Laryngitis is frequently seen in patients with upper respiratory infections who have been intubated. There is a significant increase in the incidence of laryngitis compared to that in patients without upper respiratory infections.

Subglottic edema is a condition which occurs mainly in children who have been intubated. This pathology results from an exudate developing in the areolar tissue just below the cords. Because of the small size of the child's trachea, even a 1 mm increase in size of the mucous membrane can severely impair the air passage. Children exhibit this by severe expiratory stridor and may even become cyanotic. This may so severely embarrass the child's breathing that it must be treated vigorously. Most authorities agree on the treatment[5,6,7,8] consisting of a high oxygen concentration in the inspired air (60%), plus high humidity (close to 100%). Adequate parenteral fluid intake and slight cooling of the body temperature (by a cooled oxygen tent) also help in mild cases. In severe cases, there may be hypoxia which increases the restlessness and the oxygen demand rises. Sedation is often necessary, although concomitant depression of the respiratory center is undesirable. An antihistaminic accomplishes this purpose well, and adds sedation. Since there is always a possibility that an allergic response plays a role in edema, some relief of the respiratory distress may occur. Steroids should be used to control inflammatory and allergic phenomena and swelling. If all this fails, and the patient is still restless and hypoxic, a tracheostomy should be performed immediately.

(concluded on following page)



Your patient can breathe easily, flying from New York to Rome, on just one Triaminic timed-release tablet.

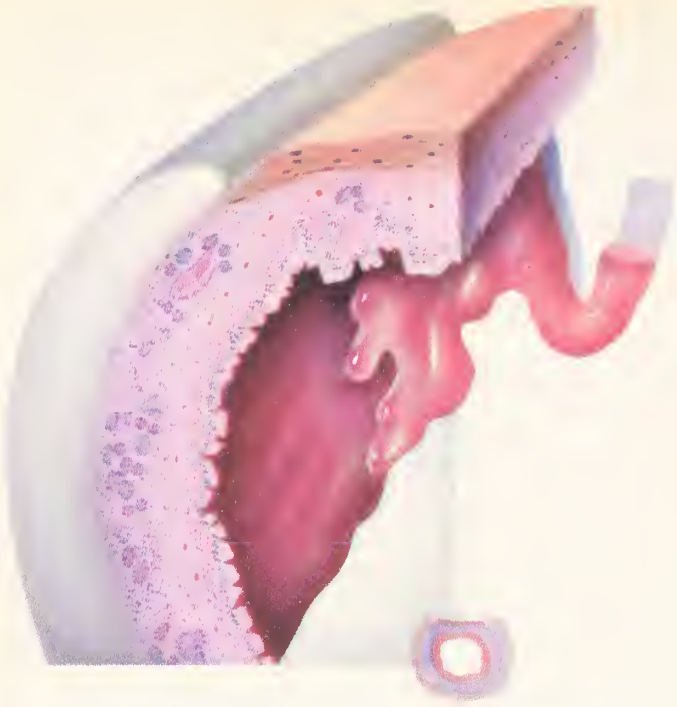
One tablet goes a long way. For 24 hour relief of nasal congestion and postnasal drip due to sinusitis, colds and respiratory allergies—simply prescribe one Triaminic timed-release tablet, swallowed whole, in morning, mid-afternoon and at bedtime.

Side Effects: Occasional drowsiness, blurred vision, cardiac palpitations, flushing, dizziness, nervousness, or gastrointestinal upsets. Precautions: The patient should be advised not to drive a car or operate dangerous machinery if drowsiness occurs. Use with caution in patients with hypertension, heart disease, diabetes or thyrotoxicosis.

Each **Triaminic**® timed-release tablet contains...

Phenylpropanolamine hydrochloride	50 mg.
Pheniramine maleate	25 mg.
Pyrilamine maleate	25 mg.

(Advertisement)



Cross section of trachea showing subglottic edema and lumen reduction due to mucous membrane congestion.

Pneumonia may also follow anesthesia administered to a patient with a cold. This can be caused by accumulated secretions becoming secondarily infected and causing consolidation of the lung. *Atelectasis* of the lung can result if one of the bronchioles becomes plugged by secretions, preventing aeration of the distal part of that lung. This is seen more frequently following upper respiratory infection because dry anesthetic gases aggravate the infection, causing secretions to change from watery to thick and viscid, and consequently difficult to suction.

Prevention of complications

The first rule to prevent complications, of course, is to use a regional or local anesthesia whenever possible. But when emergency surgery is a must, in spite of the presence of a cold, allergy, or upper respiratory infection, here are some ways to prevent complications.

Give nose drops preoperatively. This can help shrink the congested nasal mucous membranes and reduce secretions for better air passage. (Results of this method are sometimes unsatisfactory because of the short duration of effect or rebound congestion.) For longer effect, oral antihistamines with nasal decongestants are often given to provide and maintain a drying effect on secretions.

To clear the tracheobronchial tree, instruct the patient to cough preoperatively. Cold steam or water nebulizers effectively humidify the nasal, pharyngeal and bronchial passages and often make the patient more comfortable. Tenacious secretions become more watery under humidification, clear more thoroughly preoperatively and are more easily suctioned from the airway during anesthesia.

Give intravenous fluids to those patients who appear dehydrated due to a cold. In a well hydrated patient the respiratory tract secretions are less viscid and more watery. This is particularly true in asthmatics.

Summary: Administration of emergency anesthesia to a patient with a cold or upper respiratory infection can lead to a chain of events that may result in increased postoperative morbidity and even death. This is because of the excess secretions formed in these conditions. Preoperative measures to prevent or reduce these secretions should be undertaken and will result in smoother and safer anesthesia.

References

1. Ellis, G.: Anesthesia and the Common Cold, Anesthesia, 1955, Vol. 10, p. 78. 2. Smith, R. M.: Anesthesia for Infants and Children, 1963, p. 353. 3. Gillespie, Noel A.: Endotracheal Anesthesia, 1963, p. 155 et seq. 4. Smith, R. M.: Anesthesia for Infants and Children, 1963, p. 353. 5. Written, F. W.: Postoperative Laryngeal Stridor, British Journal of Anesthesia, 1966, Vol. 38, p. 73. 6. Snyder & Gants: Respiratory Obstruction at the Glottic Level, Anesthesiology, 1953, Vol. 14, p. 195. 7. Doming, M. V. & Oech, S. R.: Steroid and Antihistaminic Therapy for Postintubation Subglottic Edema in Infants and Children, Anesthesiology, 1961, Vol. 22, p. 933. 8. Gillespie, Noel A.: Endotracheal Anesthesia, 1963, p. 118.



An expectorant that makes coughs count by increasing respiratory tract fluid nearly 200%—plus an oral decongestant to relieve a probable cause of cough, postnasal drip. Your patients receive these benefits when you prescribe...

Triaminic® Expectorant

Each teaspoonful (5 ml.) contains:

Phenylpropanolamine hydrochloride	12.5 mg.
Pheniramine maleate	6.25 mg.
Pyrilamine maleate	6.25 mg.
Glyceryl guaiacolate	100 mg.
Alcohol	5%

Dosage: Adults—2 teaspoonfuls; Children 6 to 12 years—1 tsp.; Children 1 to 6 years—½ tsp. Administer every four hours. Side effects: Occasional drowsiness, blurred vision, cardiac palpitations, flushing, dizziness, nervousness, or gastrointestinal upsets. Precautions: The patient should be advised not to drive a car or operate dangerous machinery if drowsiness occurs. Use with caution in patients with hypertension, heart disease, diabetes or thyrotoxicosis.

(Advertisement)

The discomforts of
DIARRHEA
MUCOUS COLITIS
DIVERTICULITIS
SPASTIC URETERITIS
BLADDER SPASM
are relieved by direct musculotropic action with.....

Trocinate®

BRAND THIPHENAMIL HCl

Available in 100 milligram pink sugar-coated tablets.

The high therapeutic index permits dosage sufficient to relieve spasm promptly.

Administer 4 tablets every 4 hours until relief is constant, then adjust maintenance dosage.

Trocinate *BRAND* THIPHENAMIL HCl

Directly relaxes smooth muscle spasm
Combats hypermotility
Non-mydriatic, may be used in glaucoma

Sixteen years of clinical use, with absence of untoward effects, has established the safety and effectiveness of Trocinate.

Trocinate is metabolized in the body and completely eliminated, which is a safety factor. Dosage must be sufficient to maintain the therapeutic blood level.

DISPENSED IN BOTTLES OF
100, 250 AND 2000 TABLETS

Literature and samples sent upon request

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA
Manufacturers of ethical pharmaceuticals since 1856

What Doctors Should Know about First National Bank's Packaged Plan of Financing

Automobile dealers want to make your next new or used car purchase as easy and economical as possible for you.

That's why so many recommend First National Bank's Packaged Plan of Financing. This is the plan that provides quick loan approval service, First National's low rates, and the inclusion of insurance premiums if you wish.

When you're ready to buy your next car, ask your dealer for First National Bank's Packaged Plan of Financing.

1st
FIRST NATIONAL BANK
OF ARIZONA

MEMBER F.D.I.C. • FEDERAL RESERVE SYSTEM

the bank where you come first!

DIRECTORY

THE ARIZONA MEDICAL ASSOCIATION, INC., Organized 1892, 4601 N. Scottsdale Road, Scottsdale, Arizona 85251.

OFFICERS AND DIRECTORS – 1966-67

President—Paul B. Jarrett, M.D. 2021 N. Central Ave., Phoenix, Arizona
President-Elect—Arnold H. Dysterheft, M.D. McNary Hospital, McNary, Arizona
Vice President—Arthur V. Dudley, Jr., M.D. Bldg. 23, Med. Sq., 1601 N. Tucson Blvd., Tucson, Arizona
Secretary—Charles E. Henderson, M.D. 909 East Brill Street, Phoenix, Arizona
Treasurer—Fred H. Landeen, M.D. 2222 North Craycroft Rd., Tucson, Arizona
Speaker of the House—Walter Brazie, M.D. P. O. Box 631, Kingman, Arizona
Editor-in-Chief—Roland F. Schoen, M.D. 1023 E. Florence Blvd., Casa Grande, Arizona
Delegate to AMA—Dermont W. Melick, M.D. 909 East Brill Street, Phoenix, Arizona
Delegate to AMA—William B. Steen, M.D. 116 North Tucson Boulevard, Tucson, Arizona
Alternate Delegate to AMA—Daniel T. Cloud, M.D. 2021 North Central Ave., Phoenix, Arizona
Alternate Delegate to AMA—Philip G. Derickson, M.D. 744 N. Country Club Rd., Tucson, Arizona

DISTRICT DIRECTORS

Central District—Jack E. Brooks, M.D. 2021 N. Central Ave., Phoenix, Arizona
Central District—Richard O. Flynn, M.D. 2210 S. Mill Ave., Tempe, Arizona
Central District—W. Shaw McDaniel, M.D. 461 W. Catalina Dr., Phoenix, Arizona
Central District—Robert A. Price, M.D. 3602 N. 15th Ave., Phoenix, Arizona
Central District—Noel G. Smith, M.D. 3614 N. 15th Ave., Phoenix, Arizona
Northeastern District—Harry S. Beckwith, M.D. East 2nd & Colorado Ave., Winslow, Arizona
Northwestern District—Hugh E. Dierker, M.D. 505 North Beaver Street, Flagstaff, Arizona
Southeastern District—Deward G. Moody, M.D. Stage Building, Nogales, Arizona
Southern District—Warren D. Eddy, M.D. 601 N. Wilmot Road, Tucson, Arizona
Southern District—Richard L. Dexter, M.D. 116 N. Tucson Boulevard, Tucson, Arizona
Southern District—Hermann S. Rhu, Jr., M.D. 5th & Alvernon Way, Tucson, Arizona
Southwestern District—Howard W. Finke, M.D. Magma Hospital, Superior, Arizona

SOCIEDAD MEDICA DE ESTADO UNIDOS DE NORTE AMERICA Y MEXICO

President—L. Maxwell Lockie, M.D. 130 Morris Ave., Buffalo 14, New York
President-Elect—Alfonso Topete Duran, M.D. Edificio Professional, Juarez y Pavo, Guadalajara, Jalisco, Mexico
Vice President—James Nauman, M.D. 1603 N. Tucson Blvd., Tucson, Arizona
Secretary for the United States—Earl J. Baker, M.D. 550 W. Thomas Road, Phoenix, Arizona
Secretary for Mexico—Felix Michel, M.D. Pavo 112, Guadalajara, Jalisco, Mexico
Treasurer for the United States—Lucy A. Vernetti, M.D. 333 West Thomas Road, Phoenix, Arizona
Treasurer for Mexico—Eduardo Gonzales Murguia, M.D. Juarex 673, Guadalajara, Jalisco, Mexico
Executive Secretary for Mexico—Mr. Alfredo E. Patron Mazatlan, Sinaloa, Mexico

COMMITTEES – 1966-67

NOTE: The President, President-elect and Secretary are ex-officio members of all Committees unless otherwise specified.

ARTICLES OF INCORPORATION & BY-LAWS COMMITTEE: Walter Brazie, M.D., Chairman (Kingman)

BENEVOLENT & LOAN FUND COMMITTEE: Daniel T. Cloud, Jr., M.D., Chairman (Phoenix)

CENTRAL OFFICE ADVISORY COMMITTEE: Charles E. Henderson, M.D., Chairman (Phoenix)

GRIEVANCE COMMITTEE: William B. Steen, M.D., Chairman (Tucson)

HISTORY & OBITUARIES COMMITTEE: Robert S. Flinn, M.D., Chairman (Phoenix)

INDUSTRIAL RELATIONS COMMITTEE: Derald G. May, M.D., Chairman (Phoenix)

LEGISLATIVE COMMITTEE: Carlos S. Craig, M.D., Chairman (Phoenix)

MEDICAL ECONOMICS COMMITTEE: Ian M. Chesser, M.D., Chairman (Tucson)

PROCUREMENT & ASSIGNMENT COMMITTEE: Joseph M. Greer, M.D., Chairman (Phoenix)

PROFESSIONAL COMMITTEE: William G. Payne, M.D., Chairman (Tempe)

PUBLIC RELATIONS COMMITTEE: Arthur V. Dudley, Jr., M.D., Chairman (Tucson)

PUBLISHING COMMITTEE: Roland F. Schoen, M.D., Chairman (Casa Grande)

SCIENTIFIC ASSEMBLY COMMITTEE: Edward Sattenspiel, M.D., Chairman (Phoenix)

COUNTY MEDICAL SOCIETY OFFICERS, 1966

APACHE: W. Duncan Spining, M.D., President, Sage Memorial Hospital, Ganado; Ellis W. List, Jr., M.D., Secretary, McNary Hospital, McNary.

COCHISE: Raymond Grossman, M. D., President, Drawer 1059, Douglas 85607; Jorge Gaytan, M.D., Secretary, Drawer S. Douglas.

COCONINO: Hugh E. Dierker, M.D., President, 505 N. Beaver Street, Flagstaff; R. T. McDonald, M.D., Secretary, 713 N. Beaver Street, Flagstaff.

GILA: David B. Gilbert, M.D., President, Physicians & Surgeons Clinic, Payson; Alford D. Musgrave, Jr., M.D., Secretay, 703 Ash Street, Globe.

GRAHAM: John H. Walker, M.D., President, 702 8th Avenue, Safford.

GREENLEE: Gerhard L. Ihm, M.D., President, Phelps Dodge Hospital, Morenci; James W. Gilbert, M.D., Secretary, P. O. Box 1537, Clifton.

MARICOPA: Ray Fife, M.D., President, 2620 N. 3rd Street, Phoenix; Charles H. Finney, M.D., Secretary, 555 W. Catalina Dr., Phoenix.
(Society Office – 2025 North Central Avenue Phoenix)

MOHAVE: John G. Lingenfelter, M.D., President, 412 E. Oak Street, Kingman; John J. Standifer, M.D., Secretary, 412 E. Oak Street, Kingman.

NAVAJO: Claude H. Peterson, M.D., President, 1500 Williamson Ave., Winslow; Leo L. Lewis, M.D., Secretary, Santa Fe Medical Offices, P. O. Box 673, Winslow.

PIMA: Darwin W. Neubauer, M.D., President, 720 N. Country Club Drive, Tucson; Seymour A. Shapiro, M.D., Secretary, Bldg. 24, Med. Square, 1601 N. Tucson Blvd., Tucson. (Society Address: 2555 East Adams Street, Tucson)

PINAL: Chalmers D. Johnson, M.D., President, 1195 N. Arizona Blvd., Coolidge; Richard F. Adamson, M.D., Secretary, Florence Medical Center, Florence.

SANTA CRUZ: Charles S. Smith, M.D., Secretary, Gebler Building, Nogales.

YAVAPAI: Dennis R. Semkin, M.D., President, 533 W. Gurley Street, Prescott; William R. Shepard, M.D., Secretary, 1003 Division Street, Prescott.

YUMA: James Volpe, Jr., M.D., President, P. O. Box 1151, Harold N. Gordon, M.D., Secretary, 1832 8th Avenue, Yuma. (Society Address – P. O. Box 4370, Kofa Substation, Yuma)

WOMAN'S AUXILIARY TO THE ARIZONA MEDICAL ASSOCIATION – 1966-67

President Mrs. Robert G. Delph (Grace)
2019 North Crescent Drive, Flagstaff, Arizona

President-Elect Mrs. Elvie B. Jolley (Mila)
Box 919, Bisbee, Arizona

1st Vice President Mrs. Richard Hardenbrook (Kaaren)
316 Grove Avenue, Prescott, Arizona

2nd Vice President Mrs. Charles Matheus (Marilyn)
2148 East 25th Street, Yuma, Arizona

Secretary Mrs. Richard Timmons (Evelyn)
5302 N. 69th Place, Scottsdale, Arizona

Treasurer Mrs. James Parsons (Carolyn)
5251 E. Hawthorne Pl., Tucson, Arizona

Director Mrs. James B. Tucker (LaVerne)
700 East 10th Street, Casa Grande

BOARD OF DIRECTORS

Meeting of the Board of Directors of the Arizona Medical Assocition, Inc., held Sunday, July 10, 1966, in the Convention Center of the Safari Hotel, Scottsdale, Arizona, convened at 10:02 a.m., Arthur V. Dudley, Jr., M. D., Chairman, presiding.

ROLL CALL

PRESENT:

Drs. Beckwith, Harry S.; Brazie, Walter; Cloud, Daniel T.; Dexter, Richard L.; Dierker, Hugh E.; Dudley, Jr., Arthur V., Vice President and Chairman; Dysterheft, Arnold H., President-Elect; Eddy, Jr., Warren D.; Finke, Howard W.; Flynn, Richard O.; Henderson, Charles E., Secretary; Jarrett, Paul B., President; McDaniel, W. Shaw; Melick, Dermont W.; Moody, Deward G.; Price, Robert A.; Rhu, Jr., Hermann S.; Schoen, Roland F.; Smith, Noel G.

COUNSEL:

Mr. Jacobson, Edward.

STAFF:

Messrs. Carpenter, Robert, Executive Secretry, ArMA; Robinson, Bruce E., Assistant Executive Secretary, ArMA; Boykin, Paul R., Executive Secretary, BOMEX.

GUESTS:

Drs. Grossman, Raymond, President, Cochise County Medical Society; Walker, John H., President, Graham County Medical Society; Lingenfelter, John G., President, Mohave County Medical Society; Mr. Whaley, Dallas F., AMA Field Service Representative.

EXCUSED:

Drs. Brewer, W. Albert; Brooks, Jack E.; Derickson, Philip G.; Landeen, Fred H., Treasurer; Steen, William B.

WELCOME

The Chairman welcomed those Presidents of component county medical societies in attendance on arrival, pointing out that Dr. Dierker, a member of the Board and President of the Coconino County Medical Society, and Dr. Beckwith, a member of the Board and Vice President of the Navajo County Medical Society, were present, also representing their respective Societies.

MINUTES

Approved minutes of the meetings of the Board of Directors held April 26, 1966, and April 30, 1966.

HOUSE OF DELEGATES

Resolution No. 6 — Revision of Therapeutic Abortion Law

Appointed Drs. Edward C. Bill (Cottonwood); William E. Crisp, Jr. (Phoenix); David Pent (Phoenix); Herman S. Rhu, Jr. (Tucson); Edward Sattenspiel (Phoenix); and Charles E. Van Epps (Phoenix), each for the term 1966-67, to serve as an Ad Hoc Committee on Resolution No. 6, designating Dr. Sattenspiel as Chairman. Each has accepted the assignment.

Counsel, who had attended the first preliminary meeting of this group, reported upon its deliberations. With the exception of Dr. Bill, who was later appointed a member, all members were present in addition to representatives of the Arizona Hospital Association and its Counsel. An appropriate measure will be prepared and presented to the 28th Arizona State Legislature, First Regular Session. It is hoped that AHA and, possibly, AMA will support the endeavor.

Resolution No. 8 — Blue Shield Organization

The National Association of Blue Shield Plans has accepted the invitation and will compose a Task Force to visit Arizona for the purpose of investigating the advisability of having a separate Executive Director to represent each of the Arizona Blue Cross and Arizona Blue Shield plans. It is its wish that the project be postponed to late summer or early fall because of pressures and activity associate with the Medicare program. Arizona Blue Shield Medical Service has made similar request. RECEIVED.

Resolution No. 11 — Malpractice Insurance

While Resolution No. 11 was not adopted, it proposed that The Arizona Medical Association, Inc., either establish a unified malpractice defense fund and establish legal advice and medical expert availability for the defense of any physician who is a qualified member of The Arizona Medical Association, Inc., and who might be involved in a malpractice suit; further, that ArMA negotiate for a contractual obligation arrangement with one or more Commercial Insurance Companies so that members of this Association might obtain adequate malpractice insurance coverage on a group-plan similar to that of the Health and Accident and Life Insurance Plans now sponsored by it, etc. Counsel reviewed certain of the statements contained in this resolution for clarification and factuality. RECEIVED.

Resolution No. 14 — Usual, Customary and Reasonable Fee Concept

In accord with ArMA House Resolution No. 14, and a similar Resolution No. 6 passed by the Corporate Body of Blue Shield, it is reported that the "Prevailing Fee Survey" records have been destroyed in their entirety. RECEIVED.

Resolution No. 15 — Physician Members on Boards of Directors of Hospitals

In accord with ArMA House Resolution No. 15, a similar Resolution No. 14 was introduced in the AMA House of Delegates, June 27, 1966. In accord with previous recommendations of the Joint Committee of the Boards of Trustees of the AMA and AHA on Hospital-Physician Realtionships, June of 1953, and pertinent statements in the "Standards" and the Bulletins of the JCAH noted, the AMA Reference Committee endorsed the intent of Resolution No. 14, but in view of obstacles previously cited, moved that Resolution No. 14 be adopted with the following substitute resolves, which was carried:

RESOLVED, that it be the policy of the AMA: that hospital governing boards be urged to include physicians in their memberships; that, also other appropriate representatives of hospital medical staffs should attend and participate in the meetings of hospital governing boards, but that the mode of this participation be a matter for local determination; and

RESOLVED, that state and local medical societies be urged to seek the cooperation of their respective hospital associations to implement this policy.

Distribution of Resolution No. 15 to: American Medical Association, American Hospital Association, all hospital administrators in Arizona, all presidents of boards of directors of Arizona hospitals, and all constituent state medical associations, has been completed.

In accord with Resolution No. 15, the Arizona Hospital Association acknowledged receipt of said Resolution, requesting the names of the individuals to comprise the ArMA liaison committee, the time, date and place of meeting for discussion.

Drs. Arthur V. Dudley, Jr. (Tucson); Melvin Lloyd Kent (Mesa); Howard C. Lawrence, Jr. (Phoenix); Frederick J. Lesemann (Tucson); Dermont W. Melick (Phoenix); and Robert A. Price (Phoenix) appointed as the membership composite of this liaison committee, Dr. Kent to serve as Chairman.

Resolution No. 19 — Profile of Physicians' Fees

The Department of Health, Education and Welfare was encouraged to forego its desire for a profile of physicians' fees based upon a survey, irrespective of by whom conducted, and, instead, await the results of the only accurate method of establishing such data; namely, experience. A copy of the Resolution was forwarded to the Honorable John W. Gardner of HEW. Arthur E. Hess, Director, Bureau of Health Insurance — HEW, by letter dated June 21, 1966, acknowledged receipt of a copy of the Resolution adopted and expressed assurance that it will be given consideration in their deliberation of this aspect of the health insurance program. RECEIVED.

Resolution No. 13 — Arizona Blue Shield — Payment of Fee to More than One Physician

Effective July 1 1966, Arizona Blue Shield Medical Service reports implementation of Resolution No. 13, amending its regulations so that legitimate medical consultations and extended medical care, when these services are necessary, will in some way be covered to compensate the medical consultant or attending physician; further, that the surgeon requesting medical consultation and extended care designate to Blue Shield that such service was necessary. RECEIVED.

BOARD OF DIRECTORS

ArMPAC Board of Directors

Counsel reports that "in line with our previous thinking that the operations of Arizona Medical Association, Inc., and ArMPAC should be kept as separate and distinct as possible, the Board of Directors of the Arizona Medical Association should not officially pass on the Constitution and Bylaws of ArMPAC. The Constitution and Bylaws should be adopted at a duly convened meeting of the Board of Directors of ArMPAC. It is recommended that the requirement contained in Article IX of the Constitution and Bylaws (and provided further that such action has been approved by the Board of Directors of the Arizona Medical Association) for the approval by the Board of Directors of the Arizona Medican Association of any change in the Constitution and Bylaws be deleted." It was determined to so advise the ArMPAC Board of Directors.

Authorized a $500.00 contribution by ArMA to ArMPAC for the latter's "Medical political education fund."

It was further determined that, hereafter, the Chairman of the ArMPAC Board of Directors be invited to attend ArMA Board of Directors' meetings, as its guest, in order that the Board might be kept abreast and informed of the activities of ArMPAC; further, that Dr. John F. Kahle, current Chairman of the ArMPAC Board of Directors, be contacted today in an endeavor to have him appear before this Board, prior to the conclusion of its deliberations, enabling him to brief its members on the status of the operation to date.

Maricopa County Medical Society

In the matter of nation-wide publication of news stories concerning medical advances of undetermined merit by members of the profession, it was determined to refer the matter to the Professional Committee for its review and recommendation.

Joint Committee on Nursing Needs and Resources

Acknowledgement by the Joint Committee on Nursing Needs and Resources of receipt of a contribution of $1,000.00 authorized by the Board of Directors of this Association, April 26, 1966. RECEIVED.

Past President — Appointment Declination

Accepted the declination of W. Albert Brewer, M.D., (Phoenix) to serve as Past President for the term 1966-67.

Standing Committee Appointments

Reported that all members appointed or reappointed by the Board, April 30, 1966, to membership on the Benevolent and Loan Fund Committee, History and Obituaries Committee, Industrial Relations Committee, Medical Economics Committee and Publishing Committee have accepted the assignment.

GRIEVANCE COMMITTEE — Accepted the declination of W. Albert Brewer, M.D., (Phoenix) to serve as Chairman of the Grievance Committee, as Past President.

William B. Steen, M.D., (Tucson) as a Past President, designated Chairman of the Grievance Committee for the term 1966-67.

PROFESSIONAL COMMITTEE — Accepted the declination of W. Albert Brewer, M.D., (Phoenix) to serve as Chairman of the Professional Committee.

Designated William G. Payne, M.D., (Tempe) to serve as Chairman of the Professional Committee for the term 1966-67. Dr. Payne has accepted the assignment.

SCIENTIFIC ASSEMBLY COMMITTEE — Accepted the resignation of Philip G. Derickson, M.D., (Tucson) as a member of the Scientific Assembly Committee initially appointed for the term 1964-67.

Accepted the declination of Charles W. McMoran, M.D., (Sierra Vista) to serve as a member of the Scientific Assembly Committee appointed for the term 1966-69.

Appointed Daniel Bright, M.D., (Cottonwood) and Paul J. Nichols, M.D., (Phoenix) as members of the Scientific Assembly Committee, each for the term 1966-69. Each have accepted the assignment, which completes the roster of this Committee.

PUBLIC RELATIONS COMMITTEE. Designated Arthur V. Dudley, Jr., M.D., as Chairman for the term 1966-67.

All other appointments or reappointments have been accepted.

Special Committee Appointments

All appointments or reappointments to membership on the Articles of Incorporation and By-Laws Committee, Central Office Advisory Committee, Executive Committee, Medical Advisory Committee to the Arizona Atomic Energy Commission and Procurement and Assignment Committee have been accepted.

TECHNICAL ADVISORY COMMITTEE — Albert J. Ochsner, M.D., (Yuma) declines acceptance of appointment to the Technical Advisory Committee in connection with the Program for Aged.

Matthew L. Wong, M.D. (Yuma) appointed member for the term 1966-67. Dr. Wong accepts the assignment.

SECONDARY RHEUMATIC FEVER PROPHYLAXIS STEERING COMMITTEE — Robert E. Nenad, M.D., (Phoenix) and Philip E. Dew, M.D., (Tucson) appointed members to the Secondary Rheumatic Fever Prophylaxis Steering Committee to the Arizona Heart Association for the term 1966-67. Each accepts the assignment.

Ad Hoc Committee Appointments

All appointments or reappointments to membership on the Ad Hoc Committee on Federal Services and the Ad Hoc Committee on Arizona Territorial Medicine Publication have accepted the respective assignments.

Board Appointments

ArMPAC BOARD OF DIRECTORS — All members appointed or reappointed to membership on the ArMPAC Board of Directors for the term 1966-67 have accepted the assignment with the exception of Howard W. Finke, M.D., (Superior) who declined. It was determined to await the appearance this afternoon and recommendation of the Chairman of the Board, Dr. Kahle.

CARDIOVASCULAR ADVISORY BOARD — Robert E. Nenad, M.D., (Phoenix) declines reappointment to membership on the Cardiovascular Advisory Board to the Industrial Commission of Arizona.

Allan I. Cohen, M.D., (Phoenix) appointed member for the term 1966-69 and accepts the assignment.

PSYCHIATRIC ADVISORY BOARD — Industrial Relations Committee recommends dismissal of the Psychiatric Advisory Board to the Industrial Commission of Arizona. RECEIVED.

AMA Annual Meeting

Both Dr. Melick and Dr. Cloud reported upon the meeting of the AMA House of Delegates held in Chicago, Illinois, June last. A total of 106 resolutions was introduced. Major discussions involved a dues increase of $25.00 to $70.00, effective January 1, 1967, which was voted favorably (168 for to 46 against, New York and New Jersey being the principal opposition); a large number of reports and resolutions dealing with "Medicare" and the expanded Kerr-Mills program under Title XIX of Public Law 89-97, and possibly this was the most sensitive area of discussion; resolved, that, since separate billing by the physician for his professional services is a preferred ethical practice, it shall be deemed unethical for a physician to displace a hospital-based physician who is attempting to practice separate billing when said displacement is primarily designed to circumvent separate billing; in the area of Medical Ethics relating to the Principles providing: "drugs, remedies or appliances may be dispensed or supplied by the physician provided it is in the best interest of the patient," reaffirmed the 1963 House of Delegates interpretation of the words: "in the best interest of the patient," urging that, when charges of deviation develop, complaints should be made to the local society and vigorously processed by the appropriate committee of that society, and if not resolved thereby, the complaint should then be carried to the state constituent association; and adopted a substitute resolution in lieu of six resolutions introduced dealing with the subject of "discrimination" directing that the Council on Constitution and Bylaws prepare such changes in the Constitution and Bylaws "as may be necessary to permit the Judicial Council to receive and act upon appeals filed by applicants who allege that they have been unfairly denied membership in a local and/or state society."

It was directed that a copy of the report on actions of the House of Delegates be prepared and forwarded to each member of the Board of Directors and each President of the County Medical Societies.

CENTRAL OFFICE ADVISORY COMMITTEE

Membership Classifications

COCONINO Robert Eugene Westfall, M.D., (Flagstaff) —Active, granted Associate (dues exempt), account Military Service, effective January 1, 1966.

MARICOPA Kenneth A. Herbst, M.D., (Phoenix)—Active, granted Service (one-quarter dues), account employment in the Vocational Rehabilitation Department, effective June 24, 1966.

Richard L. Morgan, M.D., (Phoenix) — Active, granted Associate (dues exempt), account Military Service, effective June 23, 1966.

Floyd L. Templeton, M.D., (Tempe) — Active, granted Associate (dues exempt), account Residency, effective June 23, 1966.

Frederick Howard Hodell, M.D., (Phoenix) —Active, granted Associate (dues exempt), account Resideney, effective June 23, 1966.

PIMA Peter Julius Whitney, M.D., (Tueson) — Active, granted Associate (dues exempt), account Military Service, effective July 1, 1966.

Perinatal and Maternal Mortality Subcommittee

Authorized an expenditure of $300.00 for the purpose of sending two members of the Subcommittee on Perinatal and Maternal Mortality (of the Subcommittee on Public Health of the Professional Committee) to the AMA Conference on Perinatal Mortality to be held in San Francisco, California, in August next. This expenditure should be financed out of the Professional Committee appropriation.

FEDERAL SERVICES COMMITTEE

Approved the recommendation of the Ad Hoc Committee on Federal Services that this Board of Directors support S. 3008 (89th Congress) — to promote and assist in the extension and improvement of comprehensive

health planning and public health service and provide for a more effective use of federal funds for such planning and service. H.R. 13197 (89th Congress) is a companion bill.

Medicare

The Federal Services Committee of this Association, in meeting held June 19, 1966, recommends to the Board of Directors that a state-wide educational meeting be held at the earliest logical time for educational and discussion purposes relating to the Medicare Act, Public Law 89-97.

Counsel reported on the results of his visitation to and observation of the Medicare meeting sponsored by the AMA held in Chicago, Illinois, June 25, 1966. It is recommended: (1) that there be designated some one person in the Central Office to become very aware of all the printed material on Medicare and keep current thereon; (2) that this person go to Chicago and spend three days of nothing but briefing with various members of the AMA staff to get the fine points down solid; and (3) thereafter, come back to Arizona and then tour the fourteen county societies (Dallas F. Whaley of the AMA Field Service has agreed to tour with him). A state-wide meeting might well be considered thereafter; certainly, news bulletins could be published to keep the doctors up to date with continuing refresher visits. Obviously, there will be great need for such service within the next month or six weeks.

The Federal Services Committee requested this review and analysis by Counsel; and, because of the pressures of time and urgency of the matter, in the absence of the Chairman, Dr. Steen, who was out of town, the recommendations were presented to the two most vocal members of the Committee, Dr. Hayes Caldwell and Dr. Wallace Reed, who appeared delighted with the suggestions; also, the proposal has been discussed with the President, Dr. Jarrett, the Secretary, Dr. Henderson, and, of course, with the Executive Secretary. Each is in agreement that this proposal is the most logical one and will meet the immediate need. It is recommended that Mr. Bruce Robinson, Assistant Executive Secretary, be designated the person rather than attempt to go outside and hire a new employee not versed in the Medicare Program. Initially, suggestion was made that a lawyer be hired. It is not considered essential at this time.

It was determined that Mr. Robinson be given this assignment and that he be authorized to go to the AMA Headquarters in Chicago (for necessary training).

INDUSTRIAL RELATIONS COMMITTEE

It has been previously determined that Morris E. Stern, M.D., (Phoenix) will serve as Chairman of the Industrial Relations Committee for the year 1966-67, in accordance with the wishes of the Committee.

With regard to endorsement of certain recommendations appearing in the 1965-66 Annual Report of the Industrial Relations Committee, it was pointed out that the House of Delegates of this Association, in meeting held April 27, 1966, accepted the report, which, in effect, endorsed the recommendations of the Industrial Relations Committee. The Committee may so inform the Industrial Commission of Arizona. For the record, they are listed below:

1. With regard to the Psychiatric Advisory Board to the Industrial Commission of Arizona, certain recommendations were previously made and approved by the Board of Directors of this Association as to the utilization of such services when needed, working through the psychiatrist member of the Industrial Relations Committee; therefore, there appears no further need for this special Psychiatric Advisory Board, and it has been determined to abolish it.
2. Recommendation that the Industrial Commission of Arizona should be encouraged to consider the establishment of a definite public relations department to help alleviate many of the frictions and misunderstandings that often devolep between any large organization and the individual practicing physician, endorsed by the House of Delegates of ArMA.
3. Urging renegotiation of the Industrial Commission Fee Schedule commencing in June of 1966, one year prior to its expiration in June of 1967. The Medical Economics Committee currently has this matter in hand.
4. Recognizing that the Medical Advisor to the Industrial Commission is only an advisor, and has no administrative responsibility as such, it is recommended that the medical personnel of the Industrial Commission have more administrative authority in dealing with purely medical matters. Endorsed by the House of Delegates in ArMA.

DR. JARRETT: I have asked Counsel to review the law that sets up the Industrial Commission as the purveyors of our services, and also, they are apparently empowered to deal with employers for our services at a fee that they themselves establish. Question is raised as to the advisability of establishing a fee schedule for a term of three years under any circumstances. Certainly, the "usual, customary and reasonable" fee concept should be employed.

It was regularly moved and unanimously carried that in any discussion with the Industrial Commission of Arizona relating to fees the "usual, customary and reasonable" fee concept be adhered to.

LEGISLATIVE COMMITTEE

Counsel reported that he had not yet completed his review and study of legislative activities and operation; therefore, he requested that he be given additional time, agreeing to report at the next Board meeting. GRANTED.

PROFESSIONAL COMMITTEE

Designation of Subcommittee Chairmen

With regard to Chapter VII, Section 4 (g), of the By-Laws of this Association, Counsel advises that the President (with the advice and consent of the Board of Directors) appoints both the members of the Professional Committee and the Chairman of the Professional Committee; thereafter, the President (this time with the advice of the Chairman of the Professional Committee) appoints various members of the Professional Committee to the posts as Chairman of various Subcommittees.

Environmental Health Management

The AMA extends an invitation to this Association to

send an official representative to the National Congress on Environmental Health Management planned for April 24-26, 1967, at the Americana Hotel, New York City. This is the first national congress in this field to deal comprehensively with the management of the environment from the point of view of Medicine. It was determined to refer this matter to the Professional Committee for consideration, which already has been done.

Rehabilitation Conference

Carl R. Bjorklund, M.D., (Phoenix) designated representative of this Association to the AMA Rehabilitation Conference to be held at the Edgewater Beach Hotel, Chicago, Illinois, September 8-9, 1966 (at AMA expense). APPROVED.

AAGP-APS Mental Health Steering Committee

Referred to the Professional Committee of this Association for consideration and recommendation that ArMA establish an ad hoc committee to work with the Arizona Academy of General Practice, the Arizona Psychiatric Society and such other medical organizations as it considers suitable to form a steering committee to coordinate continuing psychiatric education programs for practicing physicians in Arizona, the outcome of the Sixth Regional Workshop on Mental Health sponsored by the American Academy of General Practice in cooperation with the American Psychiatric Association held in Las Vegas, Nevada, February, 1966.

SCIENTIFIC ASSEMBLY COMMITTEE

Progress report of the Scientific Assembly Committee in the matter of programming of the 76th Annual Meeting of this Association, to be held at the Safari Hotel, Scottsdale, Arizona, April 25 through 29, 1967.

Appointed Reginald J. M. Zeluff, M.D., (Phoenix) Assistant Chairman; appointed Charles E. Henderson, M.D., (Phoenix) Secretary; recommended that the 77th Annual Meeting of the Association be held April 23 through 27, 1968, at the Safari Hotel, Scottsdale, Arizona; recommended that the Speaker of the House be instructed, prior to his appointment of the ArMA Reference Committee on Resolutions, to contact the President of the Blue Shield Corporate Body in an endeavor to possibly appoint the same chairman to serve both Reference Committees on Resolutions,, or at least include the chairman of each on the opposite comparable Committee, in order to establish improved liaison between the two bodies in the consideration of resolutions of mutual interest; scheduling the Board of Directors' dinner for 6:00 p.m. with meeting to follow at 8:00 p.m., Tues, April 25, 1967; First Session of the House of Delegates to be held at 9:00 a.m., Wednesday, April 26, 1967, the General Session to follow at 10:00 a.m.; Second Session of the House to be held Saturday, April 29, 1967, at 8:00 a.m., ArMA Reference Committee Meetings: Articles of Incorporation and By-Laws to be announced, Resolutions to be held Wednesday, April 26, 1967, at 1:00 p.m., the Blue Shield Reference Committee on Resolutions to immediately follow in the same room; First Session of the Blue Shield Corporation meeting to be held Wednesday, April 26, 1967, at 11:00 a.m.; the Second Session of the Blue Shield Corporation to be held Saturday, April 29, 1967, at 10:30 a.m.; Wednesday evening, April 26, 1967, Reception scheduled for 7:00 p.m., Chuck Wagon Dinner to follow at 8:00 p.m.; Thursday evening, April 27, 1967, the occasion of the President's Banquet — Reception at 7:00 p.m., Dinner at 8:00 p.m.; recommended that the Registration Fee for the incoming President, including social events, be borne by the Association, and that the incoming President be given the privilege of inviting up to six outside guests to his Banquet, if he so desires, at no cost — APPROVED; Friday evening, April 28, 1967, reserved for ArMPAC (Specialty Groups and/or Alumni Groups to be granted equal privilege should any choose to schedule events on this evening); Annual Golf Tournament to be under the Chairmanship of Thomas C. Wilmoth, Jr., M.D., (Phoenix); determined to discontinue the Annual Bowling Tournament; deferred recommendation as to the 1967 Registration Fee; determined to provide space for seven Scientific Exhibits in the Exhibit Hall, including in this area three spaces for the Woman's Auxiliary Hobby Display; determined to continue the Mead Johnson Aesculapius Award Program to be judged by the Scientific Assembly Committee; Technical Exhibits to be provided within the Scientific Exhibit area only in the event not all of the seven spaces allotted are utilized; again established the fee of $200.00 for each Commercial Exhibit Booth; determined to continue the A. H. Robins Company Community Service Award program; apply for Category I Credit — AAGP; determined that the fee of $150.00 as a Guest Orator Assessment shall be charged for use of Guest Orators at specialty luncheons; determined to continue in 1967 the approach of selecting Guest Orators from a medical school (Colorado being considered), the President-Elect and the Chairman to develop the Scientific Section program; and determined to consider the possibility of providing for Specialty Sections on Thursday afternoon, April 27, 1967, between 3:00 p.m. and 5:00 p.m., open and made available to Specialty Societies, each developing and presenting their own respective programs, possibly three or four being conducted at one and the same time.

It was expressed that sooner or later consideration must be given to the conduct of two separate meetings each year, one for business and the other for scientific programs. It was indicated that this suggestion was made before the House of Delegates a year or two ago. It will be given consideration.

ARIZONA TERRITORIAL MEDICINE PUBLICATION

W. Albert Brewer, M.D., Chairman of the Ad Hoc Committee for Arizona Territorial Medicine Publication, indicated that Miss Frances Quebbeman, Author of the publication, living in Tucson, Arizona, indicated that she intended to pursue many avenues of investigation opened up in her research in preparation of the publication, and it is her intent to develop some of these rather extensively. She had offered to do this under the aegis of the Arizona Medical Association as its historian without cost. The Chair stated that this is a matter of information for the Board, and, until Dr. Brewer has further investigated this, he didn't feel that the Board could take any action at this time.

COMMUNICATIONS

Appreciation Award

Lindsay E. Beaton, M.D., Chairman, Council on Mental Health of the American Medical Association, by letter, expresses his thanks for the great honor paid him in presentation of the handsome plaque at the President's Banquet during the recent meeting. He stated that he was most moved by the gesture, and that he was happy only that he did not have to give a speech of response, since we then would have seen the eighth wonder of the modern world, a psychiatrist who was speechless. RECEIVED AND AUTHORIZED PUBLISHED IN ARIZONA MEDICINE.

AMA-ERF Contribution

Merlin K. DuVal, Jr., M.D., Dean of the College of Medicine of the University of Arizona, again expresses his thanks and grateful appreciation to the membership of the Association for the contribution in the amount of $4,699.09 to the University of Arizona School of Medicine, from the American Medical Association Education and Research Foundation. RECEIVED AND AUTHORIZED PUBLISHED IN ARIZONA MEDICINE.

Commissioner of Public Health

William J. Moore, M.D., former Commissioner of the Arizona State Department of Health, expresses grateful appreciation for the warm personal and professional relationship developed during his tenure in public office and extolled his successor. RECEIVED AND AUTHORIZED PUBLISHED IN ARIZONA MEDICINE.

OTHER BUSINESS

Doctor Draft Call

The Chair presented and read a letter from Louis Hirsch, M.D., of Tucson, in the case of Arthur D. Silver, M.D., pathologist, urging that his doctor-draft-call status be reconsidered. In the light of the Medicare Law, Dr. Hirsch's associates have agreed to provide professional laboratory coverage for eight hospitals located in the smaller communities of Southern Arizona. Without such services, these institutions would be ineligible to participate in the Medicare Program. On proper application, this case will be re-evaluated by the Arizona Advisory Committee to the Selective Service System.

ArMPAC

Dr. John F. Kahle, Chairman of the ArMPAC Board of Directors, was called upon to present a report on the activities of his Board and its program. He reviewed the history of the ArMPAC movement since its inception in 1961. He ably presented in detail its Educational Program, past, present and future. He appealed for membership support and assured the Board of Directors that everything possible is being done and will be done to realize a fruitful year.

MEETING ADJOURNED AT 3:40 P.M.

Charles E. Henderson, M.D.
Secretary

MEDICAL ECONOMICS COMMITTEE

Meeting of the Medical Economics Committee of The Arizona Medical Association, Inc., held Sunday, July 17, 1966, in the Central Office of this Association, Suite 201, Safari Building, 4601 North Scottsdale Road, Scottsdale, Arizona, convened at 10:10 a.m., Ian M. Chesser, M.D., Chairman, presiding.

ROLL CALL

PRESENT: Drs. Brown, Harvey G., Chesser, Ian M., Chairman; Dysterheft, Arnold H., President-Elect; Hardenbrook, Richard G., Henderson, Charles E., Secretary; Hoffmann, George L., Jarrett, Paul B., President; Spencer, Steven S.

STAFF: Messrs. Carpenter, Robert, Executive Secretary; Robinson, Bruce E., Assistant Executive Secretary.

EXCUSED: Drs. Ricker, John H., Robbins, Clarence L., Yeoman, Elmer E.

MINUTES

Minutes of the meeting of the Medical Economics Committee held January 23, 1966, approved.

DEPENDENTS' MEDICAL CARE CONTRACT (DA-05-114-66-MD-87)

Fee Schedule — "Cost-of-Living Index"

No further report at this time.

ODMC Program Expansion

Associate with the initial and continuing ODMC contract (DA-05-114-66-MD-87), currently extending for the term March 1, 1966, to February 28, 1967, Colonel William H. Hayes, ODMC Contracting Officer, by letter dated June 14, 1966, advises regarding expansion of the present Dependents' Medical Care Program now being considered by the Congress, eliciting the comments of this Association concerning its desire to continue the contractual relationship in the administration of the expanded program. In general terms, it will include: (a) outpatient care for dependents of active service members, (b) inpatient and outpatient care to retired personnel and their dependents, and (c) care of mentally retarded and physically handicapped children of active-duty service members. The effective date of the expansion is now July 1, 1966, subject to change.

It is the intent that the expanded program will be superimposed on the existing contractual structure with only minimal changes. Specifically, it is anticipated that the fiscal agents, who now pay physicians' claims, will also pay claims from all sources, except hospitals and institutions. Further, these agents will pay claims for reimbursement submitted by service members or their dependents for care provided in the area served by the particular agent. Indications are that their present workload will increase for the first few months until it will approximately double that which is being experienced now under the present program. In order that necessary plans for implementation of the expanded program may be made, it is desirable to know whether or not this Association is willing to assume the additional responsibilities incident to the expansion. A response by June 27, 1966, was requested. ODMC was advised that the Medical Economics Committee will be agreeable to consider the proposed expansion of the Dependents' Medical Care Program at the appropriate time; further, that it is the belief it is the concensus that, with regard to fee negotiations, the "usual and customary" concept will be requisite.

The Arizona Blue Shield Medical Service, current Fiscal Administrator, by letter dated June 15, 1966, advised ODMC that it will be pleased to participate in the expanded program, as Fiscal Administrator. It is further indicated that a "workshop" in Denver, Colorado, will be scheduled in the near future, at which time one or

more representatives of ABSMS will be invited to attend.

It was regularly moved and unanimously carried that this Committee recommend to the Board of Directors of the Association that (at the appropriate time) the ODMC contract only be renegotiated on a "usual, customary and reasonable" fee basis.

Considerable discussion ensued, especially with regard to the usual, customary and reasonable fee concept application. It was the consensus that, possibly, Dr. Chesser should represent the Association at the forthcoming Denver meeting, if invited, and that any negotiation or renegotiation involving a fee schedule should follow the concept of usual, customary and reasonable fee.

MEDICAL REPORTING — GOVERNMENTAL AGENCIES

Compensation

Dr. Hoffmann reported on the results of his study relating to the subject of compensation for medical reporting requested by the various governmental agencies.

It was concluded that extensive reports requested by governmental agencies for purposes of investigation certainly should be compensated for. A form requiring certification as to total disability under Social Security covering those individuals under age sixty-five was circulated among the members for review. In the instance of a physician seeking medical information from a VA Hospital regarding a veteran, certain charges are made for copies of the records. It is recognized the physician is ethically required to provide another physician with the record of a patient, on proper release, in instances where such patient has removed his or her self from the former area of treatment; likewise, in instances where a government agency is seeking medical information to establish compensation payments. Dr. Hoffmann was thanked for his comprehensive report.

GENERAL ELECTRIC (PHOENIX)

Medical Insurance Claims

Reviewed was a copy of instructions relating to medical insurance claims appearing in the publication "G. E. Computer - Headliner" of March 15, 1966, originating out of the General Electric Plant in Phoenix with particular reference to the statement: "Every bill for medical services has to include all of the following:*** 2. diagnosis or description of the treatment***." This was fordwarded by Arthur V. Dudley, Jr., M.D., of Tucson, with the comment: "If the insurance company is going to be this strict about paying claims, the only alternative is that medical expenses will increase. It is perfectly ridiculous to have to go through a long routine for a patient who comes in with a cold or sore throat. I feel the Medical Economics Committee very well might approach General Electric and their insurer to clearify this."

It is observed that the requirement calls for diagnosis or description of the treatment. It is the feeling of the Committee that the simple statement of the diagnosis or description of treatment is not too much to ask by an Insurance Company. The Chairman advised that he will communicate with Dr. Dudley directly.

PREVAILING FEE SURVEY

ArMA House Resolution No. 14, adopted, as amended, April 30, 1966, related to the "usual, customary and reasonable" fee concept. It was resolved that the "prevailing fee schedule" concept be abandoned forthwith by Arizona Blue Shield in favor of the usual, customary and reasonable fee concept; further, that since the Board of Directors of the Arizona Medical Association has gone on record recommending that the feasibility study be now considered ended, and, in addition, that such records be incarcerated; and further, as this survey did not result in reliable, statistical information, that these records be destroyed forthwith.

A similar resolution, numbered 6, was adopted by the Corporate Body of Arizona Blue Shield, April 30, 1966, wherein it was resolved that the "prevailing fee schedule" concept be abandoned forthwith by Arizona Blue Shield in favor of a usual, customary and reasonable fee concept; further, that since the Board of Directors of Arizona Medical Association has gone on record recommending that the feasibility study be now considered ended and, in addition, that such records be incarcerated, and as this survey did not result in reliable, statistical information, that these records be destroyed forthwith. Information has been received from Arizona Blue Shield to the effect that all records have been destroyed in their entirety by use of its paper shredding machine in accordance with the directive contained in Resolution No. 6. RECEIVED.

INDUSTRIAL COMMISSION OF ARIZONA

Relative Value Fee Schedule vs. Usual, Customary and Reasonable Fee Concept

The Industrial Commission of Arizona resolved to adopt, and place in effect June 1, 1964, the Third Revision of the Medical and Surgical Fee Schedule, using the relative value conversion factor of 4.50, accepted by this Association upon the condition that the Commission will not anticipate any additional requests for alterations or additions thereto for a period of at least three years. The Board of Directors of the Association in 1964 requested that the Relative Value Fee Schedule renegotiations be commenced at least one year in advance of the termination of the three-year period referred to in order that any modifications may become effective immediately following termination of the three-year period stipulated.

Attention was directed to action of the House of Delegates, May 1, 1965, wherein the By-Laws of the Association, Chapter VII — Standing and Special Committees, Section 4 — Composition and Duties of Standing Committees, Subsections (d) and (f) were amended, reading as follows:

"(d) Industrial Relations: This committee shall consist of at least five members, appointed on a geographic basis and with due consideration for the specialties and general practice. The committee shall represent the membership of the Association in all questions and decisions relating to medical relations under workman's compensation."

"(f) Medical Economics: This committee shall consist of at least six members appointed on a geographic basis and with due consideration of the

specialties and general practice. This committee shall deal with all matters affecting the economic status of doctors of medicine. Subcommittees will be set up within the committee and these may be enlarged as necessary."

The House intent in the adoption of these amendments was to limit the activity of the Industrial Relations Committee to representation of the membership of the Association in all questions and decisons relating to medical relations under workman's compensation; and transferring to the Medical Economics Committee the responsibility of dealing with all matters affecting the economic status of doctors of medicine (including negotiation or renegotiation of fee schedules such as that employed by the Industrial Commission of Arizona relating to the treatment of industrial injuries and occupational diseases).

Discussion ensued regarding recent controversy relating to the abdominal surgeon's fee for team surgery in anterior spinal fusion. It is contended that the fee allowed for this procedure is wholely inadequate. An appeal was made to the Industrial Commission of Arizona, which was referred to the Industrial Relations Committee. It is contended that such matters do not now fall within the province of the Industrial Relations Committee and should be directed to the Medical Economics Committee.

It was regularly moved and unanimously carried that the Industrial Relations Committee of this Association, in writing, be informed of the 1965 By-Laws amendments, reciting the continuing and current provisions relating to scope of operation of both the Industrial Relations Committee and the Medical Economic Committee, calling to the attention of the former Committee that the prerogative of negotiating or renegotiating fee schedules, and review of appeals filed by physicians relating to such fee schedule established, now rests with the Medical Economics Committee of this Association, and that they should be governed accordingly; further, that a copy of this letter be forwarded to the Industrial Commission of Arizona.

Considerable discussion ensued regarding renegotiation of the Industrial Commission Fee Schedule. It was determined that renegotiation should be conducted by the Medical Economics Committee as a committee of the whole. Question was raised as to the advisability of committing the Association to accept any fee schedule agreeably negotiated to remain in effect for a period of three years.

It was regularly moved and unanimously carried that the Industrial Commission of Arizona be advised, in writing, that the Board of Directors of this Association has directed its Medical Economics Committee to commence, at this time, renegotiation of the Fee Schedule relating to the treatment of industrial injuries and occupational diseases, on the basis of the "usual, customary and reasonable" fee concept; and, further, that it is cognizant of the fact that the law requires the Industrial Commission of Arizona to establish a fee schedule, therefore, it is concluded that the closest it can come to the usual, customary and reasonable fee concept would be the California Relative Value Schedule with a factor of 6.

It was further suggested that the Association pursue a course of investigation to determine the advisability of working toward a change in the Workman's Compensation Act.

Radiological Fees

John W. Kennedy, M.D., (Phoenix) requests the Association, through the appropriate committee, to begin negotiations with the Claim Department of the Industrial Commission, to separate radiological professional fees from hospital services, for which they now contract with the Arizona Hospital Association. It is understood the Industrial Commission is quite amenable thereto. This will be a subject and part of the renegotiation of the Industrial Fee Schedule.

COMMUNICATIONS

Crippled Children's Hospital — Anesthesiology

It was reported that the Board of Directors of this Association, in meeting held July 10, 1966, becoming aware of controversy developing in the establishment of reasonable fees in the medical field of anesthesiology associate with the Crippled Children's program, directed that a letter be forwarded to both the Arizona State Society of Anesthesiologists and the Arizona State Board of Crippled Children's Services, offering its services through its Medical Economics Committee to act as an arbiter in the interest of arriving at a mutually agreeable solution of the problem, should it be desirable by the contracting parties. Lengthy discussion ensued in reveiw of the problem in detail. It appears there is reason to believe the problem will be resolved without the assistance of the services of the Association.

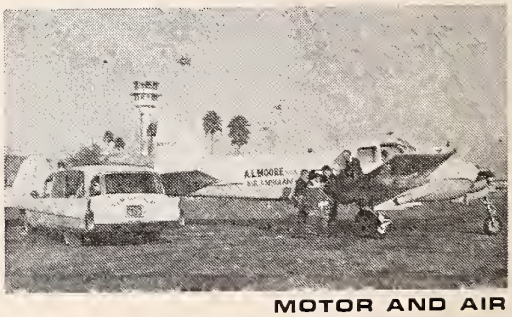
Group Retirement Plan

Bache and Company, Inc., of San Francisco, California, by letter dated July 11, 1966, advised that several state professional associations here in the West have already gone ahead and set up group retirement plans to use the "Keogh Bill" in its present form, instead of waiting for its potential liberalization. Its services were offered should this Association feel it might benefit from further exploration of the proposal. RECEIVED.

MEETING ADJOURNED AT 1:35 P.M.

Charles E. Henderson, M.D.
Secretary

24-HOUR AMBULANCE SERVICE

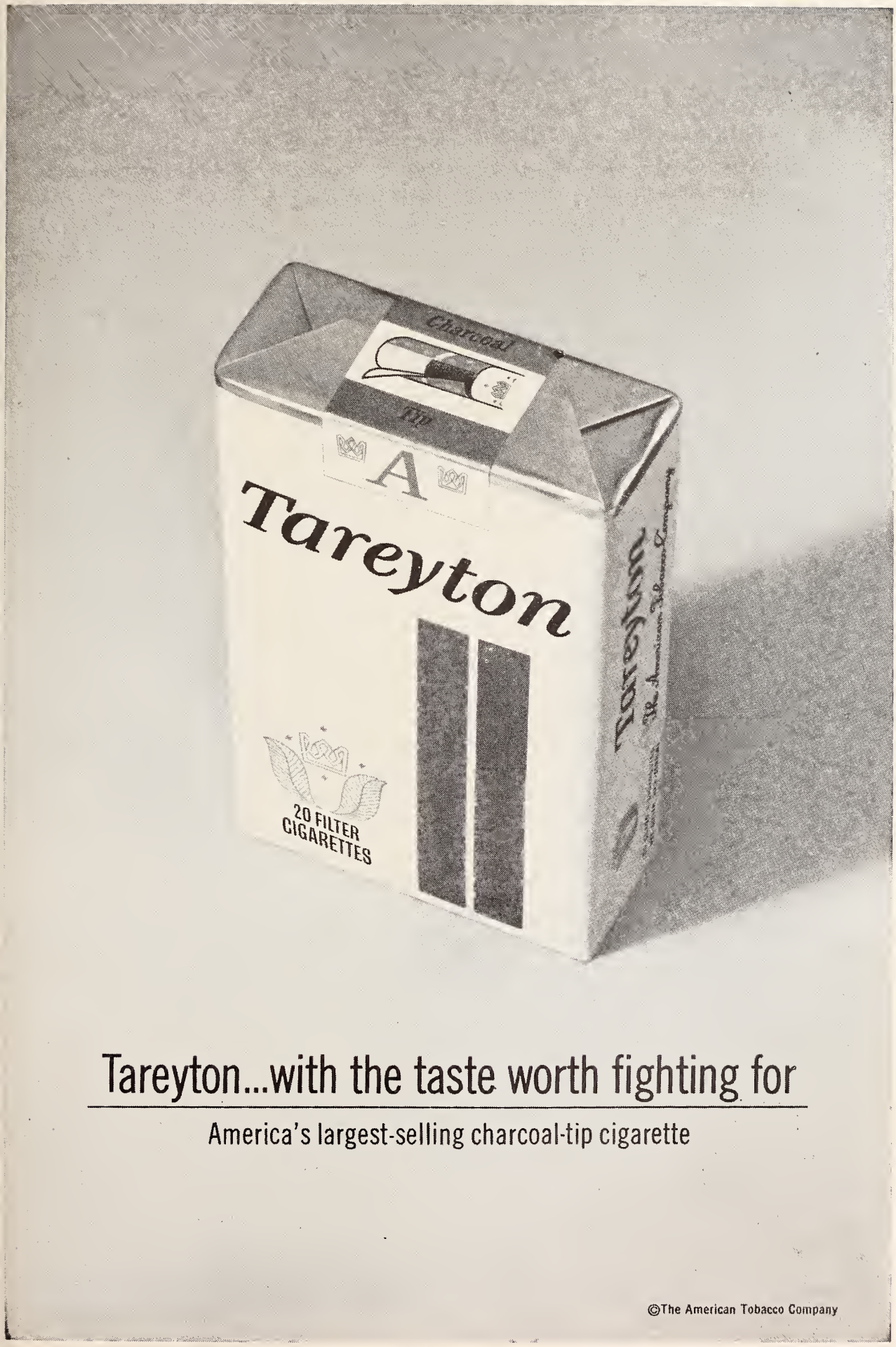


MOTOR AND AIR

A. L. MOORE & SONS

Mortuary and Ambulance Service
Adams at Fourth Ave., Phoenix

AL 2-3411



Tareyton...with the taste worth fighting for

America's largest-selling charcoal-tip cigarette

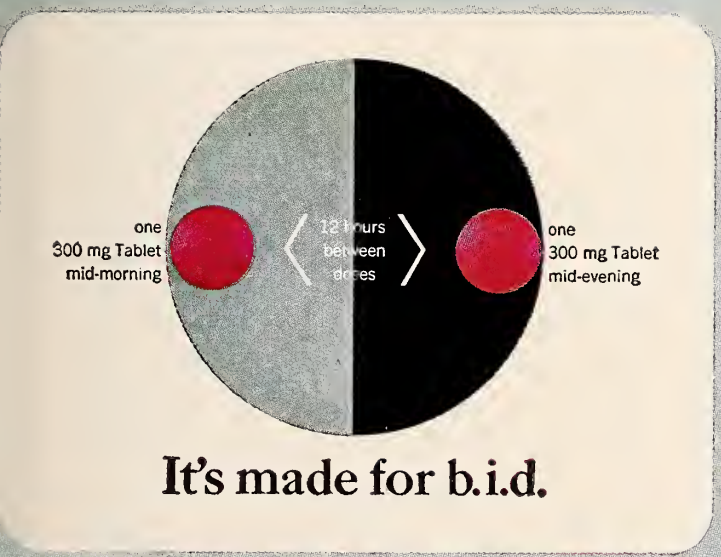
©The American Tobacco Company



why wonder about a drug

when you know

DECLOMYCIN®
DEMETHYLCHLORTETRACYCLINE
is effective b.i.d.



It's made for b.i.d.

Effective in a wide range of everyday infections — respiratory, urinary tract and others — in the young and aged — the acutely or chronically ill — when the offending organisms are tetracycline-sensitive.

Contraindication — History of hypersensitivity to demethylchlortetracycline.

Warning — In renal impairment, usual doses may lead to excessive systemic accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort.

Precautions and Side Effects — Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. Use of demethylchlortetracycline during tooth development (last trimester of pregnancy, neonatal period and early childhood) may cause discoloration of the teeth (yellow-grey-brownish). This effect occurs mostly during long-term use but has also been observed in short treatment courses. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment. Side reactions include glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and dermatitis. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Anaphylactoid reactions have been reported.

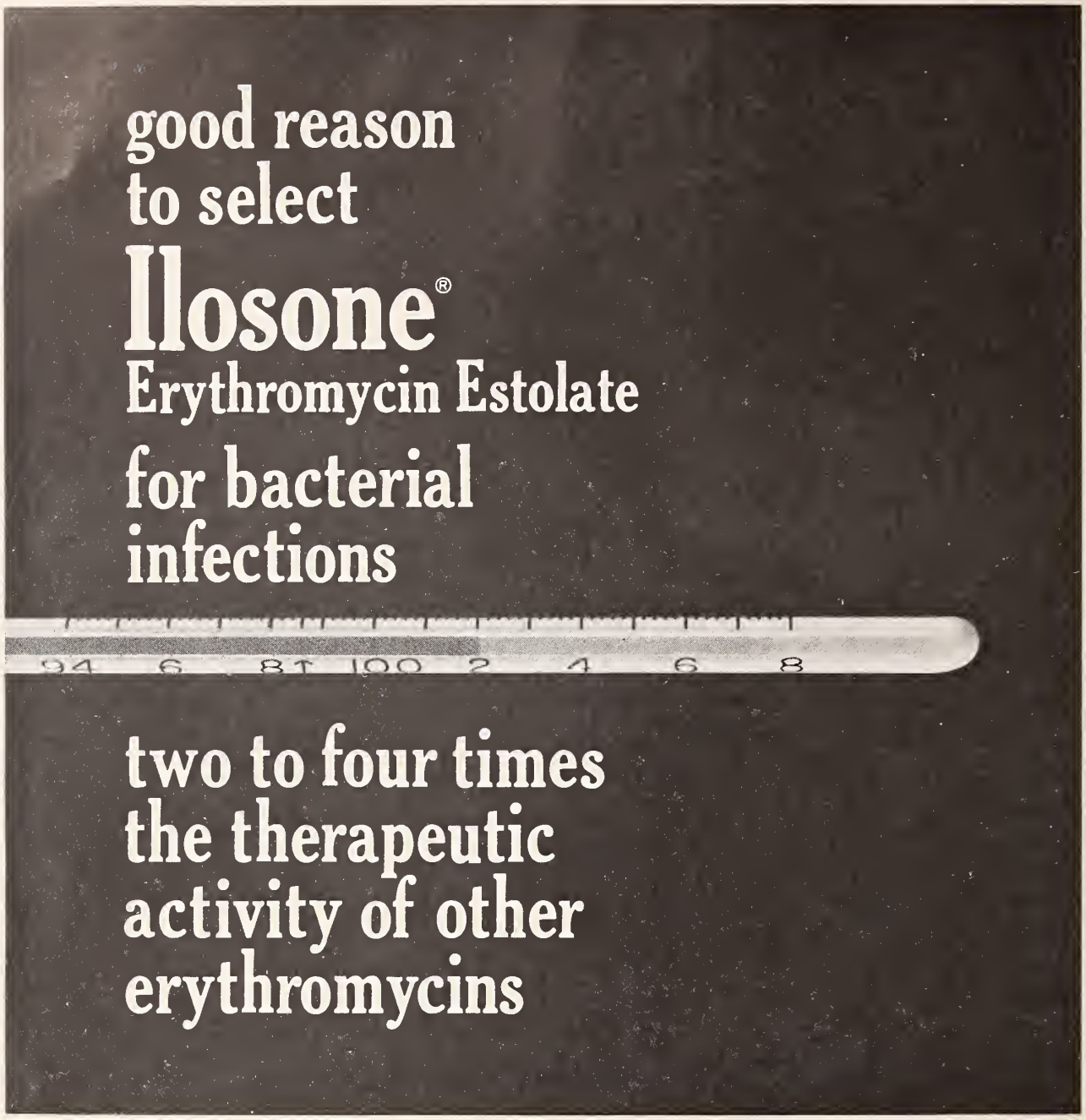
Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products.

Capsules: 150 mg; *Tablets:* film coated, 300 mg, 150 mg. and 75 mg of demethylchlortetracycline HCl.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York

417-6—4076

Lederle



CONTRAINDICATIONS: Ilosone is contraindicated in patients with a known history of sensitivity to this drug and in those with preexisting liver disease or dysfunction.

SIDE-EFFECTS: Even though Ilosone is the most active oral form of erythromycin, the incidence of side-effects is low. Infrequent cases of drug idiosyncrasy, manifested by a form of intrahepatic cholestatic jaundice, have been reported. There have been no known fatal or definite residual effects. Gastro-intestinal disturbances not associated with hepatic effects are observed in a small proportion of patients as a result of a local stimulating action of Ilosone on the alimentary tract. Although allergic manifestations are uncommon with the use of erythromycin, there have been occasional reports of urticaria, skin eruptions, and, on rare occasions, anaphylaxis.

DOSAGE: *Children under 25 pounds*—5 mg. per pound of body weight every six hours. *Children 25 to 50 pounds*—125 mg. every six hours. *Adults and children over 50 pounds*—250 mg. every six hours. For severe infections, these dosages may be doubled.

Available in Pulvules®, suspension, drops, and chewable tablets. Ilosone Chewable tablets should be chewed or crushed and swallowed with water.

Additional information available to physicians upon request.
Eli Lilly and Company, Indianapolis, Indiana 46206.

Lilly

600541

Observations On Tribe *Mimeae* (Penicillin-Resistant) Organisms

Maurice Rosenthal, M.D.*
Cloyd Hendrickson, B.S.**

This interesting article calls our attention to a group of organisms which, regardless of the taxonomic confusion concerning their classification, do function sporadically as human pathogens, and may be confused with more common pathogenic species, especially Neisseria.

Organisms of the tribe *Mimeae*, ordinarily saprophytic in character, were previously regarded as nonpathogenic bacteriologic curiosities. Recent studies have shown, however, that opportune environmental conditions allow these organisms to become pathogenic, causing severe and even fatal infections. During the past eighteen months in this laboratory†, *Mima polymorpha*‡ was discovered and established as the chief cause of serious illness in a few cases, and one fatality in a child with meningitis. Apparently, these are the first cases to be reported in Arizona.

Review of Literature

DeBord[5] first called attention in 1939 to certain gram negative diplococci which mimicked several clinical and bacteriologic features of *Neisseria gonorrhoeae*. He suggested that the bacteria be grouped into a tribe called *Mimeae*. Through the years, laboratories have often failed to find and identify these organisms simply because technicians have not been aware of or have ignored their possible existence.[24]

Townsend and others[30] described the occurrence of the Waterhouse-Friderichsen syndrome in two patients with *Mima polymorpha* as the causative agent. In this instance, 13 laboratories identified the organism as (1) a member of the genus *Neisseria*, (2) *Alicaligenes faecalis*, (3) *Klebsiella*, (4) a "gram-negative diplococcus," and (5) an unidentified species, respectively. The authors concluded that *Mima polymorpha* could, therefore, cause a fatal septicemia and might easily be confused with members of the *Neisseria* group. In contrast to the above experiences, Scott and Mahoney[26] pointed out that *Mimeae* organisms were isolated many times in laboratories where attention had been called to their importance. Incidentally, these authors also noted that some strains of *Mima polymorpha* are resistant to penicillin, according to the disk sensitivity method.

During the past two and one-half decades, recorded cases show *Mimeae* as the etiologic agent in cases of meningitis[25, 13, 12,20,10, 1, 30, 19], septicemia[9], urethritis simulating gonorrhea[29, 15], endocarditis[22, 28], lobar pneumonia[10], conjunctivitis[17, 6], and skin disease[7]. Schuldberg[25], in his description of the wanderings of *Mimeae* gave an excellent

*Director, The Diagnostic Laboratory, Phoenix, Arizona.
**Bacteriologist, The Diagnostic Laboratory, Phoenix, Arizona.

†The Diagnostic Laboratory, Phoenix, Arizona.
‡Various taxonomic names have been suggested for the tribe Mimeae. Since this paper is concerned primarily with its presence in Arizona and not with taxonomy, Mima polymorpha will be used throughout to designate this group of organisms.

account of the Waterhouse-Friderichsen syndrome. Other clinical findings reported by Brodie and Henderson[2] included osteomyelitis, postoperative infections, cystitis, upper respiratory infections, external otitis, and vaginitis. They also recovered *Mima polymorpha* from the placenta of a stillbirth.

Green and others[12] reviewed infections caused by bacteria of the tribe *Mimeae,* isolated by culture from 56 living patients and nine autopsy cases, with pure cultures from 11 living patients. These authors stressed the highly variable degree of virulence in this tribe. Blood cultures from three febrile patients yielded a pure growth of *Herellea vaginicola,* confirming its apparent pathogenicity. Many infections were associated with an iatrogenic portal of entry, such as an intravascular catheter. Over half of the 18 wound infections listed occurred following head and neck surgery. In a clinical study by Robinson[23], *Mima polymorpha* was found 91 times in 44 patients' sputum, urine, and blood samples. The patients' age range was 20 to 77 years.

Two cases of *Mima polymorpha* meningitis in the young, reported by Hermann and Melnick[14], closely resembled meningococcal meningitis and meningococcemia. Since these gram-negative bacterial agents are often penicillin-resistant, but sensitive to other antibiotics, prompt accurate identification by culture and biochemical methods is vital for initiation of early specific therapy. At the October 1965 meeting of the American Society of Clinical Pathologists, Burrows* discussed two cases of the above type of meningitis and suggested that this disease might be much more common than isolated reports have indicated.

During the past eighteen months, careful records have been kept on tribe *Mimeae* organisms recovered from clinical specimens submitted to this laboratory for bacteriological analysis. The variety of specimens from which these were recovered are worth consideration, as well as concern. The following cases picked at random from our files reveal the wide-spread occurrence of the organism and its lack of predilection for a particular site of infection.

Blood and spinal fluid from a three-year-old child were sent to this laboratory for bacteriological studies. A stained preparation revealed both intra- and extra-cellular gram negative diplococci characteristic in appearance of Neisseriae. The only available information was that the child expired at home after a high fever of several days' duration. Post-mortem examination revealed a purulent meningitis with other pathologic changes characteristic of the Waterhouse-Friderichsen syndrome. Cultures proved the existence of *Mima polymorpha* organisms.

In one instance, an adult patient was treated for gonorrheic urethritis for several weeks, but failed to respond to the usual penicillin therapy. Cultures of the urethral discharge submitted to this laboratory demonstrated the presence of *Mima polymorpha* organisms. Following this identification, the urethritis was treated with the proper antibiotic agents specific for the organism. Recovery was prompt and complete.

In another case, an adult was hosiptalized with skin manifestations of a possible meningococcemia. Cultures from the throat, skin lesions, and blood contained the *Mima polymorpha* organisms. The patient improved dramatically with correct therapy after the offending bacteria were diagnosed.**

Material from two cases of bovine mastitis has been received in this laboratory, from which *Mima polymorpha* was recovered. The host for this organism, therefore, is not limited to human beings.[8]

Bacteriology

Mima polymorpha is an aerobic, pleomorphic, gram-negative rod and has the ability to retain enough gram stain to give a bipolar staining effect; however, this is not consistent.[6] The organisms occur as diplococci — both intra- and extracellular *in vivo* — and as cocci, rods, filaments, and even short chains. They may or may not be motile[28] and form colonies not unlike that of *Neisseria,* i.e., gray, mucoid, slightly raised, entire, with some strains producing a small zone of beta hemolysis on sheep blood. Tests show the organism to be able to withstand freezing for as long as twenty-one days.

Biochemically, *Mima polymorpha* is not ambitious. Growth on S-S agar, indol production, reduction of nitrates, and Inositol are consistently negative. There is no change in TSI agar. The catalase test is positive, but the oxidase test is positive in only one strain, *Mima polymorpha*

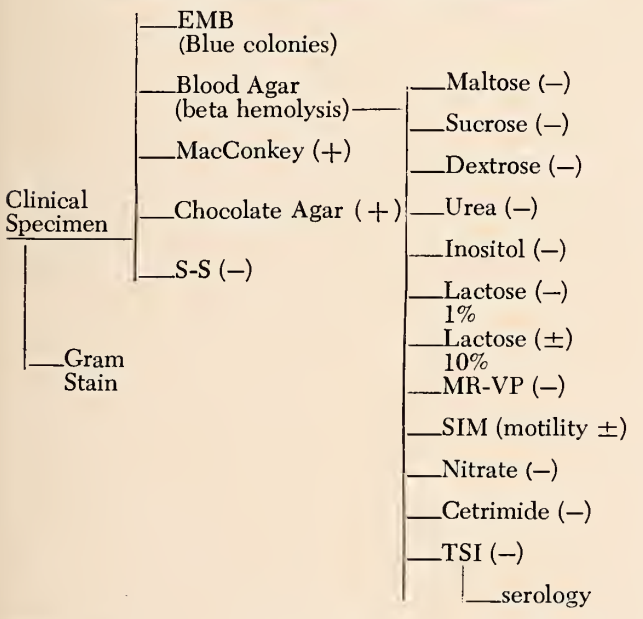
*Stanley Burrows, Ph.D. Asistant Professor of Pathology, Temple University School of Medicine, Philadelphia, Pennsylvania.

**This case is being prepared for publication.

var. *oxidans*. Lactose may or may not be fermented in one per cent concentration, but will usually be reduced in ten per cent concentrations (*Herellea vaginicola*). Growth on EMB is variable, but when it does occur, typical blue colonies will appear. Hydrogen sulfide production has been reported positive when tested by more sophisticated methods than the above.[4]

Gram stained slides should be prepared from clinical material and carefully examined for gram-negative organisms which may be intra- or extra-cellular. Where gram-negative organisms are found in stained slides and have the characteristics of *Neisseria*, every effort should be made to identify them correctly in order to assure prompt and proper treatment of the patient. In this laboratory, the regimen of choice in identifying isolates is found in Table 1.

TABLE 1
Schema For Identification of Tribe Mimeae



After recovery on primary cultures, sub-cultures are routinely made on various sugars for observation of biochemical reactions. Although a workable method for serologic studies has been devised[16], an effective commercial antiserum is not yet available. In this laboratory, however, recent studies with an experimental antisera furnished by Difco Laboratories* for identification of *Herellea* and *Mimeae* organisms have thus far produced gratifying results. Further experiments will be done in cooperation with Difco Laboratories in order to determine the feasibility and practical aspects of developing the antisera for the above serodiagnostic procedures. Guinea pig inoculation is not done routinely, but may be done when biochemical studies are variable or inconclusive.

*Difco Laboratories, Detroit, Michigan.

In general, if blue colonies are found on EMB agar which: (1) do not grow on S-S agar, (2) do not change TSI, (3) do not produce indol, (4) but which are catalase positive, (5) grow on MacConkey's agar, (6) which are beta hemolytic and (7) aerobic, then the gram-negative, pleomorphic, diplococci, rods or cocci in the colonies are almost certainly members of the tribe *Mimeae*.

Antibiotic studies almost always demonstrate that *Mima polymorpha* is penicillin resistant[29]. Most of these studies, however, were made before the advent of (or did not include) semisynthetic penicillins. In this study, all strains of the tribe *Mimeae* were penicillin resistant, but sensitive *in vitro* to ampicillin and chloramphenicol without exception, and to the tetracyclines and sulfas in general. All other antibiotics had a variable effect on growth inhibition *in vitro*. Green and others[12] found Sodium colistimethate, kanamycin sulfate, methenamine mandelate, and Polymyxin-B Sulfate to be the most effective therapeutic agents.

Discussion

Lack of definite classification of *Mimeae* organisms is marked by their absence from the seventh edition of Bergey's *Manual of Determinative Bacteriology*[1]. One attempt to identify the tribe and develop a scheme for serological identification was made by Mitchell and Burrell[16]. In addition to *Mima polymorpha*, *Bacterium (Achromobacter) anitratum*[2], *Colloides*[6], *Mima-Moraxella*[3], *Herellea*[23], *B5w*[27], and *Flavobacterium*[18] are taxonomic labels which have been proposed for the tribe *Mimeae*.

It has been concluded that members of the tribe *Mimeae* are opportunistic in their invasion of the patient. The individual's susceptibility to clinical infections from members of the tribe *Mimeae* as a result of a certain environmental factors has not been explored, except indirectly in the cases of venereal transmission[29]. Complete epidemiological studies have yet to be made, most authors having dealt chiefly with the organisms' idiosyncrasies and their stirpes.

Summary

The clinical and bacteriologic significance of a group of bacterial agents belonging to the

tribe *Mimeae* has been emphasized. These organisms may mimic other organisms, especially organisms of the *Neisseria* group, and are responsible for various disease states in humans as well as in animals. They are often penicillin resistant, but have been found sensitive to other antibiotics and drugs. Prompt identification and rational therapy are essential and may be life-saving procedures.

BIBLIOGRAPHY

1. Breed, R. S., Murrey, E. D.G., Smith, N. R.: Bergey's Manual of Determinative Bacteriology, ed. 7, Baltimore: Williams and Wilkins Co., 1957.
2. Brodie, J. and Henderson, A.: Further Observations on Mima polymorpha and Achromobacter (Bacterium anitratum), J Clin Path 17:513-516, 1964.
3. Controni, G., et. al.: Review of the Literature on Classification of the Mima-Moraxella, Amer J Med Techn 30:257-262, 1964.
4. Controni, G., Sayer, M. A.: Hydrogen Sulfide Production by Herellea, Amer J Med Techn 31:301-304, 1965.
5. DeBord, G. G.: Organisms Invalidating the Diagnosis of Gonorrhea by the Smear Method, J Bact 38:119-121, 1939.
6. DeBord, G. G.: Description of the Tribe Mimeae with Three Genera and Three Species and Two New Species of Neisseria from Conjunctivitis and Vaginitis, Iowa Stat Coll J Sci 16:471-480, 1942.
7. Dexter, H. L., et. al.: Skin Disease due to Mima polymorpha, Arch Derm 77:109-111, 1958.
8. Ellis, E. M.: Recovery of Bacterium anitratum (B5w) from Animals, Amer J Vet Res 22:610-613, 1961.
9. Faust, J., and Hood, M.: Fulminating Septicemia Caused by Mima polymorpha, Amer J Clin Path 19:1143-1145, 1949.
10. Glick. I. M., et. al.: Lobar Pneumonia with Bacteremia Caused by Bacterium anitratum, Amer J Med 27:183-186, 1959.
11. Graber, C.D., Higgins, L. S., Davis, J. S.: Seldom Encountered Agents of Bacterial Meningitis, JAMA 192:956-960 (June 14) 1965.
12. Green, G. S., et. al.: Mimeae: Opportunistic Pathogens, JAMA 194:1065-1068 (December 6) 1965.
13. Green, J. D.: Bacterium anitratum Meningitis: Report of Case and Review of Literature, Arch Intern Med 106:186-189, 1960.
14. Herman, G., Melnick, T.: Mima polymorpha Meningitis in the Young, Amer J Dis Child 110:315-318, 1965.
15. Ino, J., Neugebaur, D. L., and Lucas, R. N.: Isolation of Mima polymorpha, var. Oxidans from Two Patients with Urethritis and Clinical Syndrome Resembling Gonorrhea, Amer J Clin Path 32:364-366, 1959.
16. Mitchell, P. D., and Burrell, R. G.: Serology of the Mima-Herellea Group and the Genus Moraxella, J Bact 87:900-909, 1964.
17. Moor, W. A.: The Possible Occurrence of Bacterium anitratum in Several Cases of Conjunctivitis, Amer J Ophthal 32: 1593-1594, 1949.
18. Nelson, J. D., Shelton, S.: Cultural, Biochemical and Immunological Properties of Mima, Herellea, and Flavobacterium Species, Appl Microbiol 13:801-807, 1965.
19. Olafsson, M., Lee, Y. C., Abernethy, T. J.: Mima polymorpha Meningitis, New Eng J Med 258:465-470 (March 6) 1958.
20. Peyla, T. L., Burke, E. C.: Mima polymorpha Meningitis; Report of Two Cases in Children, Mayo Clinic Proc 40:236-239, 1965.
21. Pickett, M. J., and Manclark, C. R.: Tribe Mimeae, an Illegitimate Epithet, Amer J Clin Path 43:161-165, 1965.
22. Pike, R. M., Schulze, M. L., and McCullough, M.: Isolation of Mima polymorpha from a Patient with Subacute Bacterial Endocarditis, Amer J Clin Path 21:1094-1096, 1951.
23. Robinson, R. G., Garrison, R. G., and Brown, R. W.: Evaluation of the Clinical Significance of the Genus Herellea, Ann Intern Med 60:19-27, 1964.
24. Russell, J. P.: An Identification of Gram-Negative Pleomorphic Bacilli, Amer J Clin Path 44:86-93, 1965.
25. Schuldberg, 1. I.: Clinical and Pathologic Simulation of Meningococcic Meningitis, Amer J Clin Path 23:1024-1027, 1953.
26. Scott, E. G., and Mahoney, B. A.: Occurrence of Members of the Tribe Mimeae in Human Infections, Delaware Med J 25:22-24, 1953.
27. Simpson, M., and Crossley, V.: Bacterium anitratum (B5w) Strains Isolated in Ontario, Canad J Public Health 45:259-264, 1954.
28. Sorrell, W. B., and White, V.: Acute Bacterial Endocarditis Caused by a Variant of the Genus Herellea, Amer J Clin Path 23:134-138, 1953.
29. Svihus, R. H., Lucero, E. M., Mikolajczyk, M. T.: Gonorrhea-Like Syndrome Caused by Penicillin-Resistant Mimeae, JAMA 177:121-124 (July 15) 1961.
30. Townsend, F. M., Hersey, D. F., and Wilson, F. W.: Mima polymorpha as a Causative Agent in Waterhouse-Friderichsen Syndrome, U.S. Armed Forces Med J 5:673-679, 1954.

The Pharmacetutical Manufacturers Association disclosed today that the government's Wholesale Price Index for ethical drug preparations dropped .3 percent in June to a new record low of 93.8.

In other words, prescription ingredients sold by manufacturers for $10 in January, 1961, when the index was begun, were available in June, 1966, for only $9.38.

The data was reported to the association by the Bureau of Labor Statistics of the U.S. Department of Labor.

Principles Of Management Of Cardiorespiratory Failure

Thomas L. Petty, M.D.
Bernard E. Levine, M.D.
D. Boyd Bigelow, M.D.

This is basic discussion of current trends in the therapy of cardiorespiratory failure.

The term cardiorespiratory failure, broadly defined, encompasses a wide variety of clinical-pathological states in which the heart and lungs together fail to meet the demands for tissue oxygenation and carbon dioxide removal. The various disease states in which combined cardiorespiratory failure may occur can best be classified in terms of the principle pathologic functional change. These include impaired ventilation, defects of diffusion and gas exchange, altered ventilation-perfusion relationships and decreased cardiac output (Table #1) occurring singly or in combination.

The therapeutic concepts to be presented are based upon considerations of the pathophysiologic alterations found in all types of cardiorespiratory failure. We will emphasize that the basic principles of care for any such patient must include: 1) the provision of patent conducting airways 2) normal arterial oxygenation 3) adequate carbon dioxide elimination 4) maintenance of normal hydrogen ion concentration and 5) support of effective cardiac output. Specific therapeutic maneuvers will be needed in each differing clinical situation, but adherence to these general principles is essential to satisfy the metabolic requirements of any patient with cardiorespiratory failure.

Department of Medicine, University of Colorado Medical Center and the Webb Waring Institute for Medical Research.

Presented at the 1966 Arizona Chest Disease Symposium.

Table 1

Clinical and Physiological States
Associated with Cardiorespiratory Failure

I Ventilation Impaired
- A. Chronic airways obstruction (Emphysema, chronic bronchitis, chronic asthma)
- B. Restrictive defects
 - 1) Decreased lung expansion (interstitial fibrosis, pleural effusion, pneumothorax, fibrothorax)
 - 2) Restricted thorax (kyphoscoliosis, crushed chest, thoracic surgery)
 - 3) Decreased diaphragmatic excursion (abdominal surgery, ascites, peritonitis, severe obesity)

II Diffusion and Gas Exchange Abnormalities
- A. Pulmonary Fibrosis (Sarcoidosis, fibrosing alveolitis, pneumoconiosis)
- B. Pulmonary edema (non-cardiogenic)
- C. Congestive atelectasis
- D. Oblituative pulmonary vascular disease
- E. Anatomic loss of functioning lung (resection, massive fibrosis, tumor)

III Ventilation – perfusion abnormalities and venous admixture
- A. Emphysema, chronic bronchitis, bronchiolitis
- B. Atelectasis, pneumonia, thromboembolism, post-perfusion syndrome.

IV. Myocardial Disease with Impaired Cardiac Output (cardiogenic pulmonary edema)
- A. Ischemic, valvular, congenital, myocardopathy

THE RESPIRATORY CARE UNIT

The development of specialized respiratory care units designed to provide the personnel and equipment for effective pulmonary management has been a major contribution in the therapy of patients with acute cardiorespiratory insufficiency. The organization and function of a respiratory care unit is beyond the scope of this report. However, it should be stressed that an organized team approach including the disciplines of internal medicine, surgery, pulmonary physiology and intensive nursing care are fundamental to the successful operaton of a unit.

This paper is based in large part on the experience of our respiratory care unit (1 & 2) at the University of Colorado Medical Center. The organizational structure of our respiratory care unit is summarized in Figure 1. Such a unit is capable of coordinating the complex therapeutic modalities needed in cardiorespiratory failure, and can achieve a well-organized program for each patient.

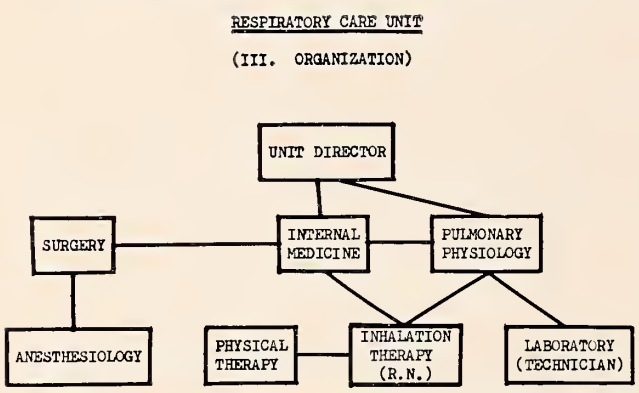


Fig. 1 — Organizational Structure for the Respiratory Care Unit, University of Colorado School of Medicine.

CLINICAL EXAMPLES

It is not the intent of this report to list all of the specific details of management for the large number of clinical situations in which cardiorespiratory failure occurs. The clinical application of the basic principles of management can best be displayed in four illustrative cases. These cases were cared for recently by the respiratory care unit.

Case #1 E.D. (CGH #219715), a 62-year-old white male filling station attendant was admitted 7/16/64 because of marked dyspnea. The patient was a life-long smoker, but stopped 2 months prior to admission because of symptoms of Buerger's disease. Chronic cough and progressive dyspnea had occurred over the past 8 years. Increasing cough and expectoration two weeks before entry, and a marked increase in dyspnea prompted admission.

Examination revealed marked dyspnea and cyanosis. The temperature was 38° C., the pulse 102, and the blood pressure was 130 systolic, 70 diastolic. Jugular venous pressure elevation was noted with the patient at 45°. Breath sounds were markedly decreased throughout and a fine scattered wheeze was heard on auscultation. Heart tones were distant and the pulmonic closure was increased in intensity. Hepatomegaly and tibial edema were present.

Laboratory tests revealed the hematocrit was 45 per cent, the white-cell count 16,000 and the sputum cultured "normal flora".

The admitting diagnoses were "chronic airways obstruction," acute bronchitis, cor pulmonale, and congestive right heart failure.

Initial management included digitalization and antibiotics. A diuresis resulting in 6Kg. weight loss occurred within 48 hours, but dyspnea was not relieved and sputum became tenacious. Subsequently stupor developed and the respiratory care unit was consulted.

The patient appeared cachectic and could scarcely be roused. Tracheostomy was performed and large amounts of thick, purulent secretions were removed. Chest x-ray (Fig. 2) shows only hyperinflated lung fields and the tracheostomy tube. Ventilation was supported using a cuffed tracheostomy tube and a pressure cycled ventilator. Intravenous aminophylline was used and antibiotics continued. After 48 hours of ventilatory support, the patient was fully alert and could support near normal ventilation and gas exchange assisted by oxygen at 3 liters per minute using a tracheostomy cover. Features of the patient's course are listed in Figure 3. Ambulation was possible on the 6th day and the trachеostmy tube was removed on the 8th day.

Thereafter, the patient made an uneventful recovery and gained 14 Kg. dry weight and was able to return to work 2 months later. Pulmonary function determinations performed 1, 3, and 12 months after the episode of cardiorespiratory failure are listed on Table 2. The patient has remained well for 24 months following the episode of respiratory failure working full time as a service station attendant in a community at 8000 feet altitude.

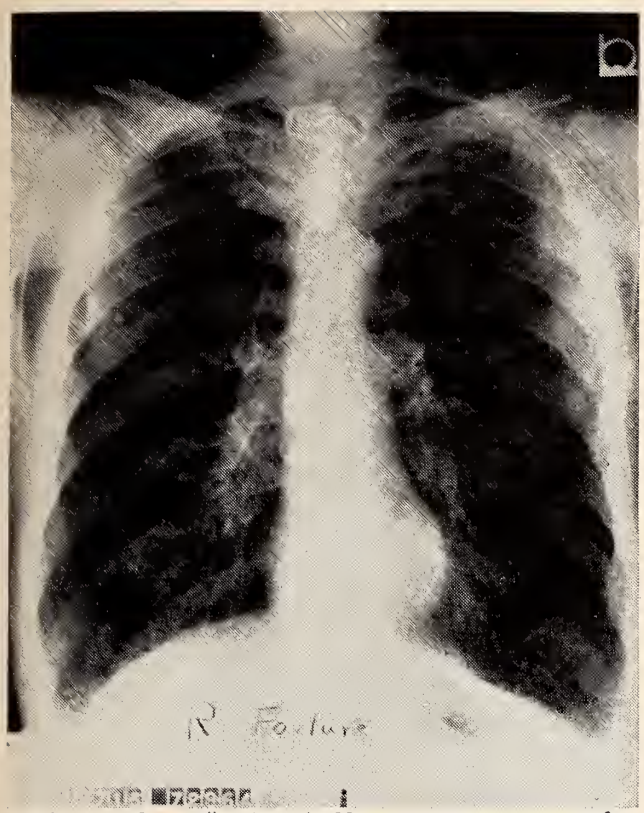


Fig. 2 — Case #1 (E.D.) Chest Roentgenogram after Tracheostomy and at beginning of controlled ventilation.

Comment: Combined respiratory failure with congestive right heart failure occurred in this patient with chronic airways obstruction during an acute respiratory infection. Management with cardiac glycosides and antibiotics, provided little improvement at first. Recovery was finally made possible by removing secretions via tracheostomy and by providing adequate CO_2 removal and oxygenation by means of a ventilator; later normal oxygenation was supported by supplemental oxygen.

Respiratory failure in chronic airways obstruction occurs because of alveolar hypoventilation and abnormalities in gas exchange. The hypoxia produces pulmonary hypertension and this is further aggravated by the accompanying respiratory acidemia resulting in right heart strain and eventual congestive right heart failure.[4] Thus management of the respiratory component is fundamental.

In addition to the supportive care, the successful management of the underlying potentially reversible factors in respiratory failure are equally necessary for recovery. Thus, an attack on bronchospasm, the removal of secretions, plus antibiotics for the bacterial component of the pulmonary infection are essential to return pulmonary function to optimum levels.[5] Managing secondary polycythemia, when it is present, with phlebotomy can be important in facilating cardiac recompensation.

It is important to stress that life-threatening respiratory failure can occur in patients with only moderate pre-existing pulmonary disease. With proper therapy these patients can return to useful active lives.

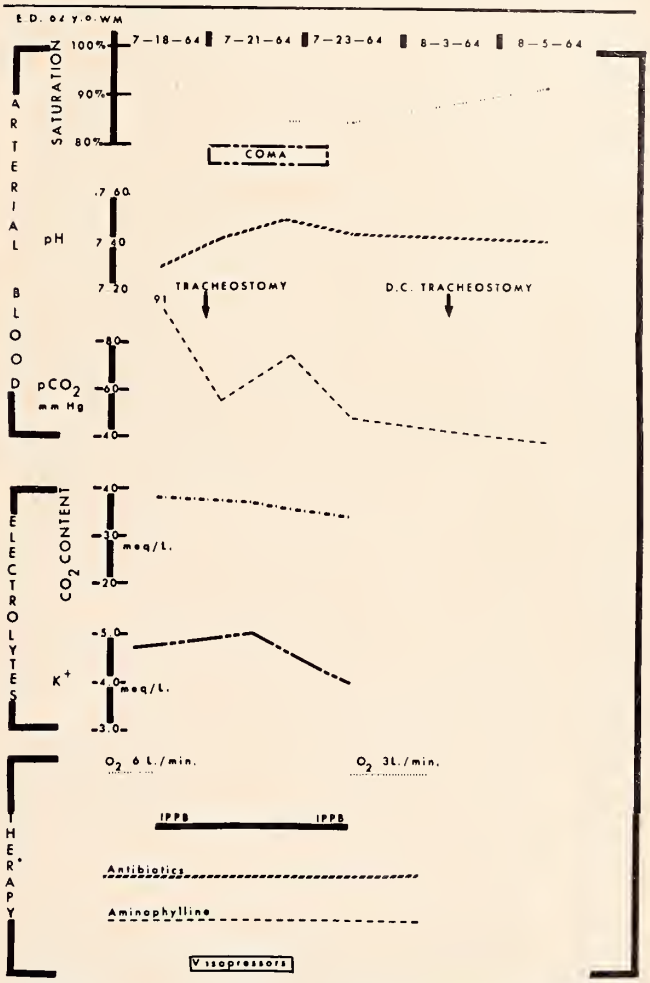


Fig.3 — Case #1 (E.D.) Clinical Course and Therapeutic Measures.

Table 2
Pulmonary Function after Recovery from Cardiorespiratory Failure

E.D. (CGH #219715)

	1 Month	3 Months	12 Months
VC	3.37 (93%)[2]	3.18 (88%)	3.28 (84%)
FEV_1[1]	1.12 (33%)	1.04 (33%)	1.42 (43%)
MMEF	.45	0.40	0.42
MBC	50 (45%)	51 (46%)	52 (47%)
pH Rest	7.45	7.41	7.40
Exercise	7.40	7.40	7.41
pCO_2 Rest	39	43	40
Exercise	43	—	—
pO_2 Rest	68.5	65	—
Exercise	59	—	—
SaO_2 Rest	94%	92%	94%
Exercise	89%	—	—
Dco[3] Rest	—	8.3	—
Exercise	—	14.0	—
TLC		9.31 (5.98 L pred.)	
RV		6.10 (2.19 L pred.)	
RV/TLC		66% (37%)	

1. FEV_1 expressed as % VC
2. % predicted
3. Steady State Method[3]

Case #2 B.G. (CGH #227521), a 58-year-old Spanish coal miner was admitted on 11/25/64 because of acute, progressive dyspnea during the month before entry. Following the acute onset of symptoms, pneumonia was diagnosed in another hospital, but no lasting improvement occurred with a variety of antibiotics.

On entry the patient was markedly dyspneic with cyanosis noted. The temperature was 37° C., the pulse 110, and the respirations 25. The blood pressure was 110 systolic, 60 diastolic. Jugular venous pressure elevation was noted with the patient elevated to 45°. Signs of consolidation were present at both bases, posteriorly; fine, diffuse crackling rales were heard in all lung fields. The pulmonic closure was increased; a gallop rhythm was not present. Hepatomegaly and mild edema were present. Laboratory tests revealed a hematrocrit of 52 per cent, the white-cell count 10,3000 with sputum cultured "normal flora". Chest x-ray (Fig. 4a) revealed dense infiltration in both lower lung fields and fine diffuse reticular markings consistent with pulmonary fibrosis. The EKG was normal.

The admitting diagnoses were pulmonary fibrosis, chronic pneumoitis, cor pulmonale with congestive right heart failure.

Ventilation tests performed 2 weeks after admission (Table 3) revealed both a restrictive and an obstructive ventilatory impairment plus mild hypoxemia at rest.

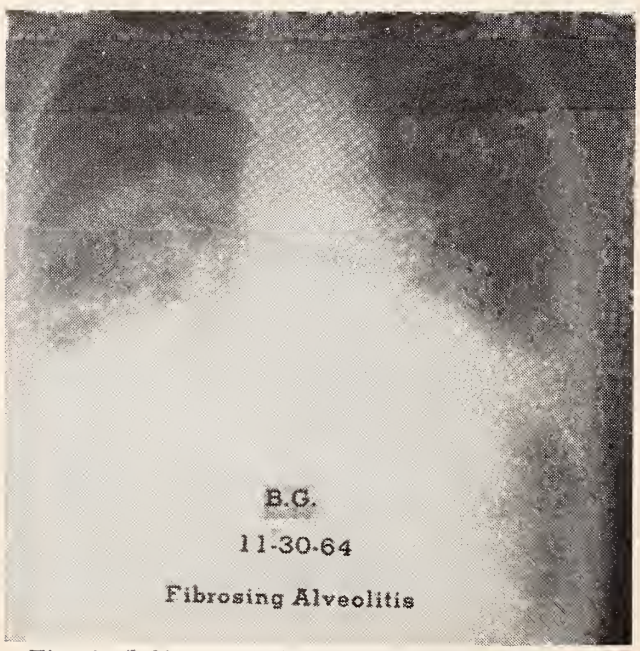
Initial management included salt restriction and antibiotics with little or no improvement. Marked clinical improvement occurred with prednisone 15 to 30 mg daily and subsequent ventilation tests were considerably better (Table 3). The patient was discharged on 1/13/65 with maintenance prednisone 10 mg daily. Chest x-ray (Fig. 4b) shows considerable clearing of the basilar infiltrates.

Table 3
Case #2—Fibrosing Alveolitis
Ventilation Tests and Blood Gases on Admission and after Admission

	12/15/64 (Admission)	1/8/65 (After corticosteriods)	Predicted
V.C.	1.52	2.09	3.33 liters
FEV	.91	1.61	>75% of V.C.
MMF	0.50	2.06	3.71 ± 1.00 L/sec.
MBC	54	94	114 L/min.
SaO_2	88.5		>92%
pCO_2	42		36-38
pH	7.505		7.40

On 3/65 congestive right heart failure with jugular venous hypertension and peripheral edema were again noted. Diuresis and improvement in the signs of congestive heart failure occurred coincident with the administration of digitalis. One month later migratory polyarthralgias occurred, and increasing dyspnea precipitated another hospital admission. On this occasion an open lung biopsy was performed which revealed fibrosing alveolitis.

Following recovery from the operation, the patient was again discharged on a maintenance cardiac regimen and maintenance prednisone, 10 mg daily.



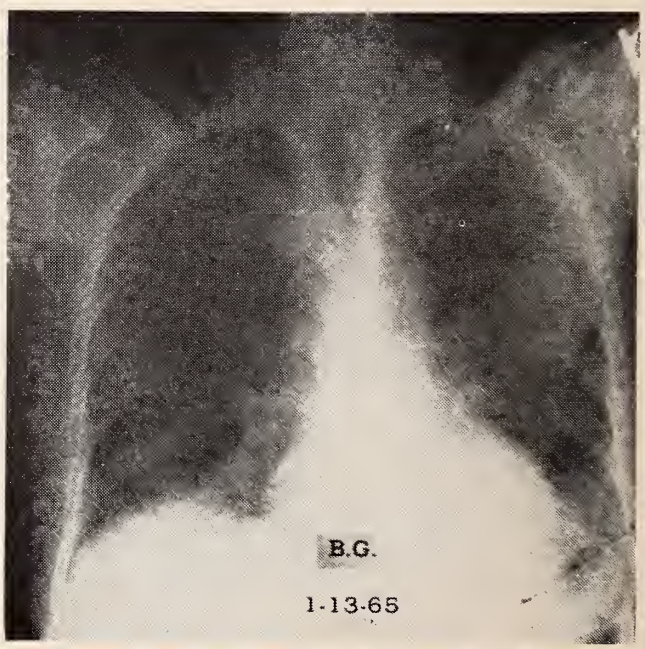


Fig. 4a (left) — Case #2 (B.G.) Chest Roentgenogram on admission showing dense alveolar infiltrate in both lower lung fields. 4b (right) Clearing after corticosteroid therapy.

On 10/65 increasing dyspnea again occurred with edema formation. Signs of congestive heart failure were again present. No skin abnormalities were observed. Mild clubbing was found. A chest x-ray (Fig. 5) revealed marked "honey combing" with fibrosis of both lower lung fields. The EKG now revealed a rightward axis and right ventricular and auricular enlargement. Arterial blood revealed pO_2 38.5, oxygen saturation 74% and pCO_2 42. An esophagogram revealed dilatation and absence of esophageal peristalsis.

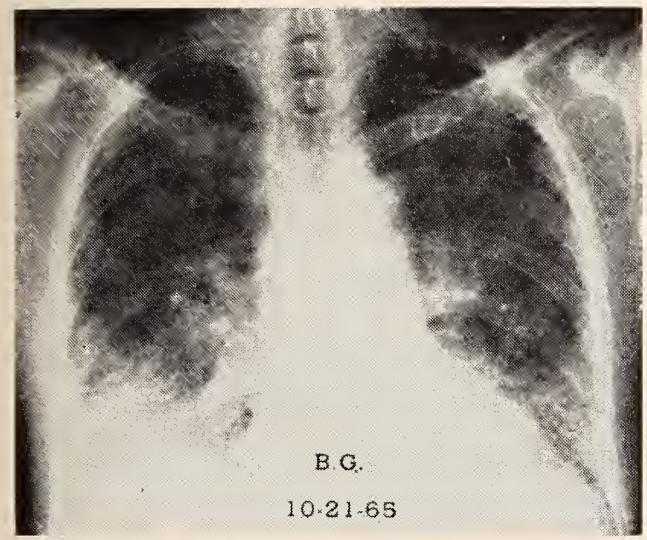


Fig. 5 – Case #2 (B.G.) Chest Roentgenogram taken 11 months after admission – marked honeycombing fibrosis is present in both lower lung fields.

With maintenance digitalis, diuretics, oxygen by nasal canula and large doses of prednisone, clinical improvement and duiresis of 4 Kg. occurred. On an increased dose of prednisone, 30 mg daily, the patient's clinical course stabilized. Arterial studies 1 week after increased steroid dosage revealed pO_2 72, oxygen saturation 95%, pCO_2 45, pH 7.42. Details of the clinical course are summarized graphically in Figure 6.

Comment: Combined pulmonary and cardiac failure occurred in this patient with pulmonary fibrosis. This case manifests many of the features of fibrosing alveolitis[6]; this entity is also frequently called diffuse interstitial pulmonary fibrosis[7]. The migratory polyarthritis with decreased esophogeal motility also implicates progressive systemic sclerosis as a possible underlying disease.

In this case impaired oxygen transfer due both to diffusion and ventilation abnormalities as well as possible fibrotic pulmonary vascular obliteration led to pulmonary hypertension and right heart failure. No evidence of vasculitis was found on histologic section.

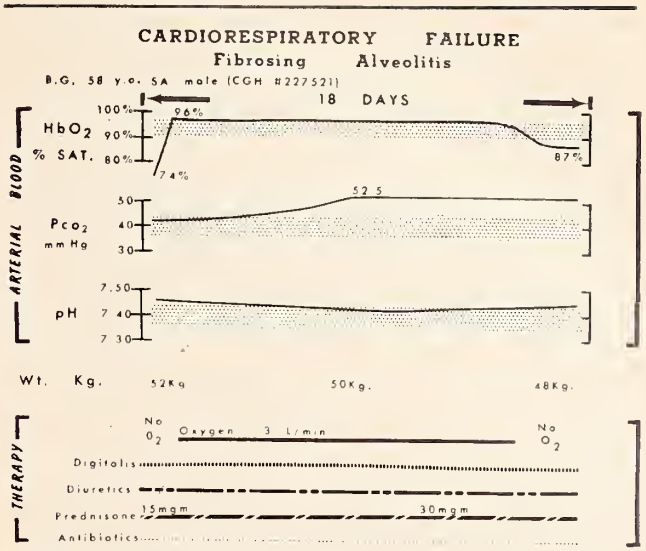


Fig. 6 – Case #2 (B.G.) Clinical course and therapeutic measures.

Improvement occurred with a heart failure regimen including digitalis and diuretics plus supplemental oxygen, because of moderately severe hypoxemia, during the last hospitalization. Corticosteroids probably provided improved oxygen transfer, presumably by combating alveolitis.

Case #3 S.R. (CGH #247590), a 26-year-old housewife was admitted to CGH on 10/1/65 because of recurrent chest pain and hemoptysis. One month earlier left leg pain had occurred and progressed. Hemoptysis first occurred 2 weeks later which prompted admission to another hospital. Treatment with subcutaneous heparin sodium was begun. Four days later severe bilateral pleuritic chest pain occurred, but then subsided over twenty-four hours. On the day of admission to Colorado General Hospital sudden severe chest pain again occurred accompanied by hypotension, diaphoresis and marked anxiety. The patient had received oral synthetic estrogens and progestins for contraceptive purposes for 3 months before the onset of symptoms.

Physical examination at the time of transfer revealed an acutely ill young female with cyanosis and labored respirations. The temperature was 102°F., the pulse 120, and the respirations 40. The blood pressure was 104 systolic, 70 diastolic. Dullness to percussion was present at the right base posteriorly where bronchial breath sounds were heard. Examination of the precordium revealed an increased sound of pulmonic closure. No signs of peripheral phlebitis were found.

The EKG revealed right axis deviation, probable right ventricular strain with ST and T wave changes. The chest x-ray (Fig. 7) revealed diffuse bilateral alveolar infiltrates and bilateral pleural effusions. A lung scan utilizing radioiodine labeled macroaggregated albumin revealed decreased activity in the entire right lung and the left lower lung. (Fig. 7).

Laboratory studies revealed a hematocrit of 34 per cent; the white-cell count was 10,800, the SGOT was 90 units and the LDH was 500 units. The arterial pCO_2 was 39; deep lung alveolar pCO_2 (as measured by the Haldane-Priestly method) was 33 resulting in an elevated A-a difference of 6 mg Hg. Arterial saturation was 76 per cent with the patient breathing room air.

The preoperative diagnosis was multiple pulmonary embolization and acute cor pulmonale.

A bilateral pulmonary artery embolectomy was performed using cardiopulmonary bypass. At surgery the right lower lobe and portions of the left lower lobe were reddened and consolidated. The right atrium and ventricle were distended.

The pulmonary artery was opened at the bifurcation of the main pulmonary artery where a 13 cm clot on the right was removed. This portion of the embolus nearly totally occluded the right pulmonary artery. A similar clot 7 cm long was removed from the left pulmonary artery.

The inferior vena cava was ligated and a tracheostomy was performed for purposes of supporting ventilation and controlling secretions. The duration of ventilatory assistance, therapeutic measures and determinations of arterial pH and blood gases are summarized in Table 4.

After 2 days of ventilatory support, near normal blood gases were possible by use of only supplemental oxygen administered by nasal prongs. All pulmonary assistance was discontinued in 5 days and an uneventful recovery followed. The patient was discharged on the 9th hospital day and has remained well for 5 months following the operation. The chest x-ray and RISA scan performed after the operation are shown in Figure 8. Clearing of the right lung infiltrate and a marked improvement in the perfusion of the right lung are noted.

RECURRENT PULMONARY EMBOLI

S.R. 26 y.o. WF (CGH #247590)

Date	Clinical Status	Arterial Saturation	pCO_2	pH	Respiratory Therapy
10-1 2:45 PM	Admission Cyanotic & Dyspneic	79%	38	7.48	None
10-1 4:00 PM	Dyspneic	88%	39.7	7.47	Nasal Oxygen 5 L/min
10-1	PULMONARY EMBOLECTOMY - CARDIAC BYPASS				
10-1 11:00 PM	Immediately Post-operative	92%	40	7.32	Tracheostomy Constant IPPB 40% O_2
10-2 10:00 AM	Clinically Stable	100%	37.2	7.49	Constant IPPB
10-3	On IPPB	98%	41	7.46	
"	Off IPPB 45 min	99%	39.5	7.475	Tracheal O_2 3 L/min
10-5	Off O_2 1 hour	85%	39.5	7.47	
10-8	Off O_2 24 hours	89%	37	7.50	Tracheostomy Removed
10-12	Ambulatory Off O_2	92%	36	7.50	--
10-18	Discharge				

Table 4
"Case #4 (S.R.) Clinical features, blood gas determinations and respiratory therapy"

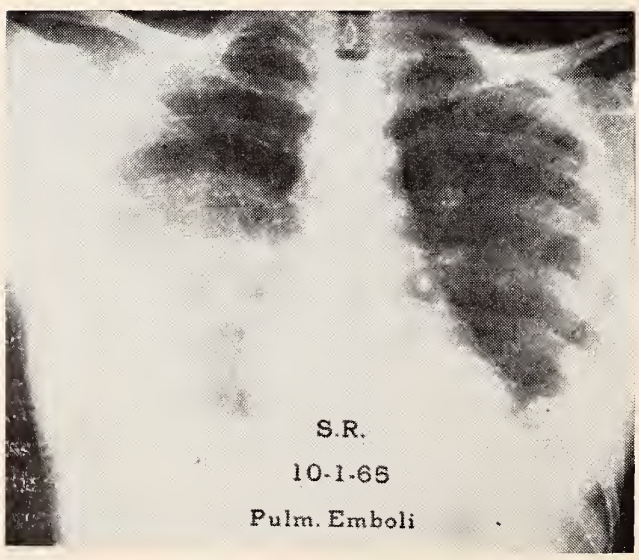
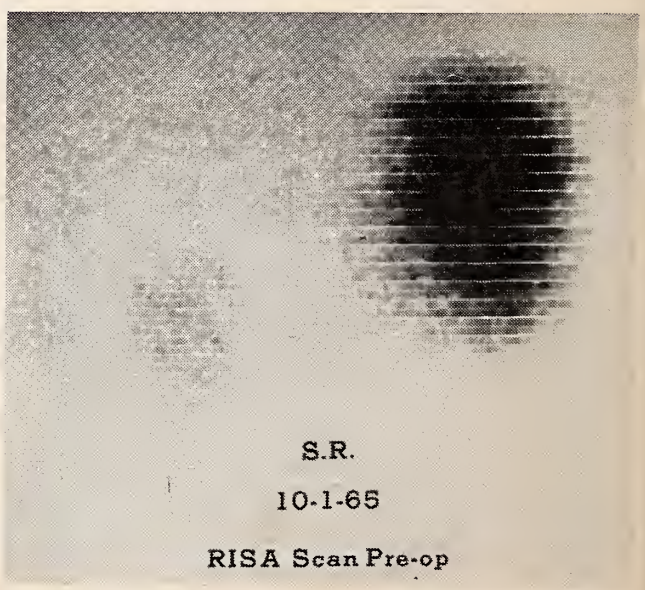
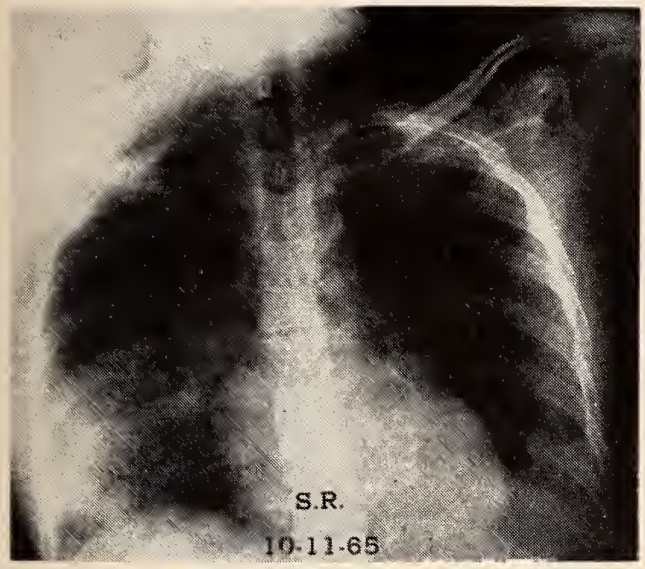


Fig. 7 – Case #3 (S.R.) Chest Roentgenogram and RISA scan on admission. Note dense alveolar infiltrates in both lower lung fields and decreased perfusion on right.





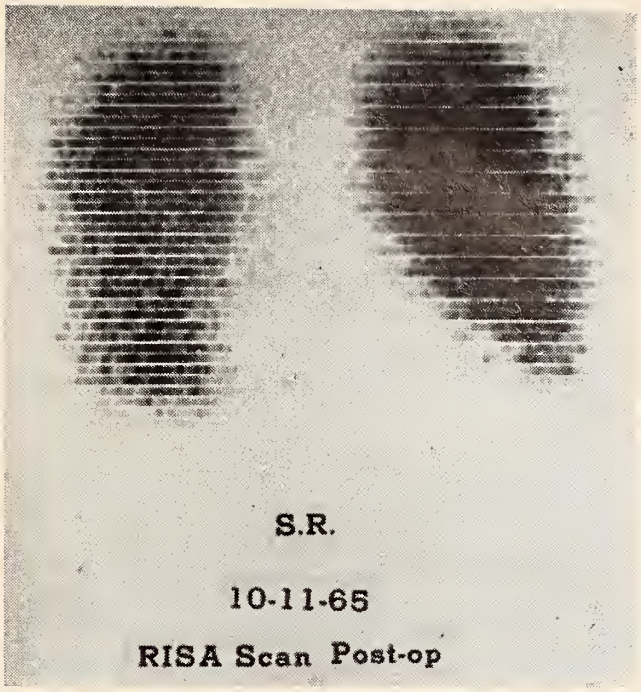


Fig. 8 – Case #3 (S.R.) Chest Roentgenogram 10 days after embolectomy showing a clearing of infiltrates and improved perfusion of right lower lung field.

Comment: In this case of recurrent embolization leading to massive occlusion of the pulmonary arterial system, cardiac failure was manifested by recurrent hypotension, dyspnea, and signs of acute right heart decompensation. Respiratory failure was manifested by moderately severe hypoxemia caused by a decrease in functioning lung parenchyma and also to poorly understood intrapulmonary shunting.[8]

Successful management included reversal of the cardiac burden and re-establishment of pulmonary circulation by thoracotomy for removal of clots from both pulmonary arteries. Support with supplemental oxygenation for the short preoperative period and support of ventilation and gas exchange with a mechanical respirator in the post operative period provided normal blood gases. Digitalization and removal of secretions via the tracheostomy were also important therapeutic measures.

Case #4 G.N. (CGH #245063), a 56-year-old business man was admitted 8/26/65 because of dyspnea and orthopnea. He had been ill for 6 years with recurrent pleural effusions associated with congestive heart failure considered to result from a myocardopathy. Earlier cardiac catherization had revealed impaired filling of both ventricles and a limited thoracotomy revealed pleuritis, pericarditis with a non-constrictive pericardium. The heart failure had been managed with cardiac glycosicles, thiazides and salt restriction. A marked increase in dyspnea and increased peripheral edema occurred during the week before admission.

Laboratory examination revealed the hematocrit was 42 per cent, the white-cell count 13,700, and purulent sputum revealed "normal flora" on culture. After admission, during oxygen administration arterial blood studies showed: pCO_2 98 mm Hg, saturation 97 per cent and pH 7.25. The chest x-ray on admission shows a marked pleural effusion on the right. Post thoracentesis film shows chronic pleural thickening (Fig. 9). With salt restriction, mercuhydrin, ethacrinic acid and spironolactones, diuresis occurred coincident with marked clinical improvement. The clinical course is summarized in Figure 10. An ambulatory program was begun aided by the use of portable oxygen* and the patient was discharged on the 17th hospital day with a maintenance program of digoxin, ethacrinic acid and spironolactone. Recurrent episodes of congestive heart failure accompanied by moderate respiratory failure occurred over the following 6 months. On 3/1/66 a right sided decortication was performed to help improve ventilatory function. Histologic study of the resected specimen revealed nonspecific "chronic pleuritis." The degree of functional improvement gained will be determined by future studies after full recovery has been achieved.

Comment: The underlying heart disease in this case has not been specifically identified and

*Provided by the Linde Division, Union Carbide Corporation, Tonawanda, N. Y.

the relationship of the heart and pulmonary disease is somewhat unclear. Since, by history, the congestive heart failure antedated the pulmonary involvement, a reasonable thesis might include chronic pleural effusion from recurrent congestive heart failure progressing to a loculated pleural effusion, with organization and fibrosis resulting in lung entrapment and a restrictive ventilatory defect. Ventilatory function during the first admission (Table 5) revealed both a restrictive and obstructive ventilation abnormality.

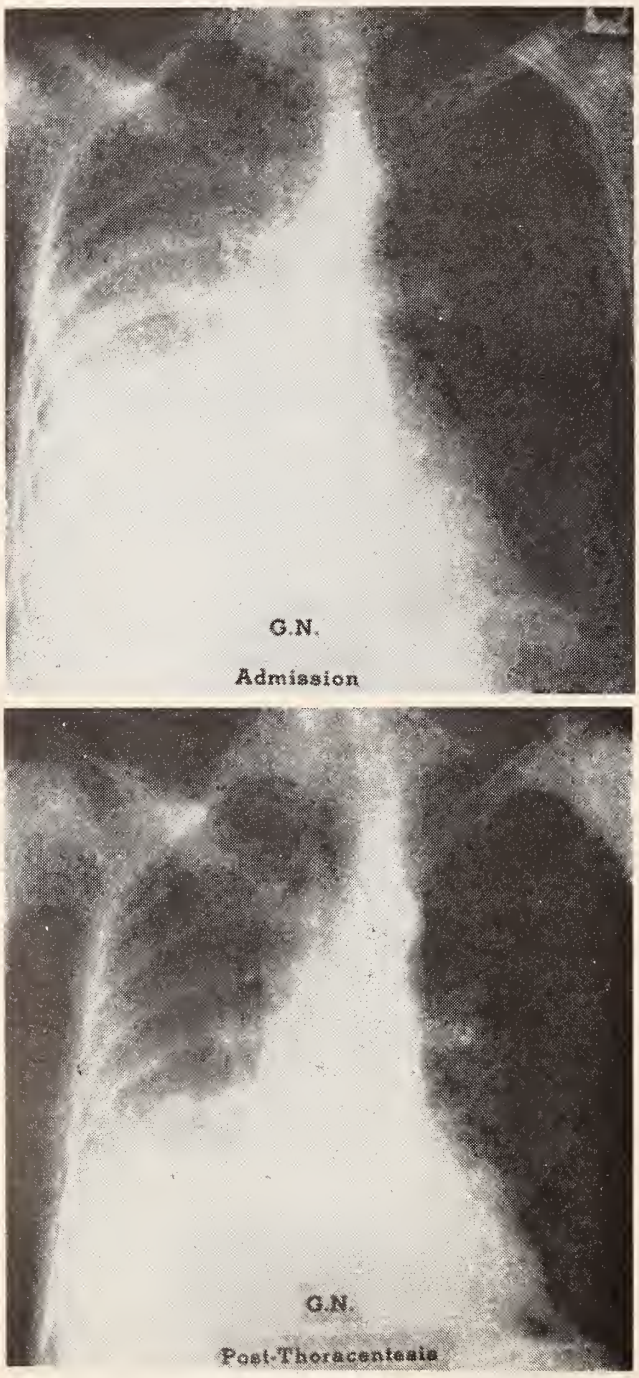


Fig. 9 – Case #4 (G.N.) Chest Roentgenograms on admission and following thoracentesis – marked pleural effusion and pleural thickening are present on the right.

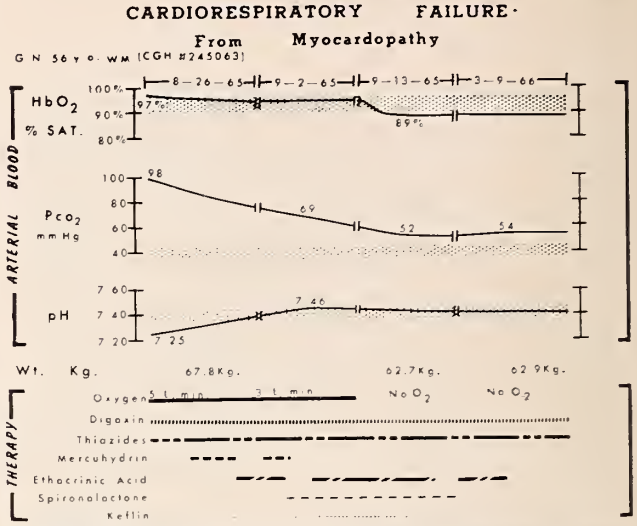


Fig. 10 – Case #4 (G.N.) Clinical course and therapeutic measures.

Table 5
Case #4–Cardiorespiratory Failure Associated with Myocardiopathy
(Ventilation tests on Admission)

	Observed	Predicted
V.C.	1.52	4.93 liters
FEV	88%	>75% of V.C.
MMEF	1.20	3.71 ± 1.00 liters/sec.
MBC	40	134 liters/min.

Acute respiratory failure may be caused by acute left-sided cardiac failure in the absence of significant pre-existent pulmonary disease.[9] Pulmonary edema leads to decreased lung compliance, and loss of available alveolar surface for gas exchange as well as airway obstruction from the edema foam. In this situation ventilatory support combined with measures to maintain airways free of edema foam are basic therapeutic principles. In addition specific therapy directed at improving cardiac function and supporting cardiac output are ssential to reverse the primary disease process.

DISCUSSION AND SUMMARY

Acute cardiorespiratory failure in patients with a potentially reversible component is a common clinical problem today. Proper management requires intensive supportive respiratory care while specific therapy is directed at the primary disease process. In any case of cardiorespiratory failure immediate therapeutic measures to correct the altered physiology are of fundamental importance. Patent airways must be established, adequate blood oxygenation and CO_2 removal provided, hydrogen ion concentration controlled and effective cardiac output maintained.

The four illustrative cases represent application of these principles of therapy in vastly different clinical situations, i.e., chronic airways obstruction, fibrosing alveolitis, massive pulmonary embolism and chronic congestive heart failure. In each case basic management principles were utilized along with specific therapy appropriate to the individual clinical problem.

Application of the principles of cardiorespiratory care may be efficiently performed by a consulting cardiorespiratory care unit. This specialized team can most effectively coordinate all phases of acute therapy for these desperately ill patients .

ACKNOWLEDGMENT

The invaluable assistance of members of the Respiratory Care Unit is acknowledged by the authors. Appreciation is especially expressed to David G. Ashbaugh, M.D., Michael Finigan, M.D., Ludovic Lacquet, M.D., Phillip Corsello, M.D., Susan Tyler, B.S. and Louise Nett, R.N.

These studies were supported in part by the 1964 and 1965 General Research Support Fund grant FR-05357-01 and by Public Health Service Pulmonary Training Grant HE-5450.

REFERENCES

1. Bigelow, D. B. and Petty, T. L.: Organization and Function of a Respiratory Care Unit. (Presented at 8th Aspen Emphysema Conference) Principles of Management of Chronic Obstructive Lung Disease, U.S.P.H.S. publicatioon.
2. Bigelow, D. B., Petty, T. L., Ashbaugh, D., Levine, E. E., Nett, L. M. and Tyler, S. B.: Acute Respiratory Failure (A Discussion of Recognition, Pathophysiology and Management and a Review of Recent Experience of a Respiratory Care Unit)
3. Filley, G. F., MacIntosch, D. J. and Wright, G. W.: "Carbon Monoxide Uptake and Pulmonary Diffusing Capacity in Normal Subject at Rest and Exercise," J. Clin. Invest. 33:530, 1954.
4. Harvey, Rejane M. The Influence of Hydrogen Ion in the Control of Artery Pressure in Patients with Obstructive Disease of the Lungs. Progress in Research in Emphysema and Chronic Bronchitis, 2:108, 1965, S. Karger, New York.
5. Mitchell, R. S. and Petty, T. L. Chronic Obstructive Bronchopulmonary Disease, Conn's Current Therapy 89, 1966.
6. Scadding, J. G. Fibrosing Alveolitis, Brit. Med. J. 2:686, 1964.
7. Stack, B. H. R., Grant, I. W. B., Irvine, W.5, Moffat, M. A.5. Idiopathic Diffuse Interstitial Lung Disease. Am. Rev. Resp. Dis. 92:939, 1965.
8. Levy, S. E., Stein, M., Totten, R. S., Bruderman, I., Wessler, S. and Robin, E. D. Ventilation — Perfusion Abnormalities in Experimental Pulmonary Embolism. J. Clin. Invest. 44: 1699, 1965.
9. Anthonisen, N. R. and Smith, H. J. Respiratory Acidosis as a Consequence of Pulmonary Edema. Am. Int. Med. 62:991, 1965.

ARMA TO SPONSOR OPEN CIRCUIT MEDICAL TELEVISION POSTGRADUATE PROGRAMS

Commencing Wednesday, September 21, 1966, weekly television programs will be sponsored by the Arizona Medical Association. These will be clinical programs designed for professional viewing. In Tucson, the programs will be carried by station KUET. Station KAET will provide coverage to the Phoenix area. A schedule of broadcasting dates and times will be forwarded to member physicians in the near future.

When uncontrolled diarrhea brings a call for help



When the diarrhea sufferer has run the gamut
home remedies without success, pleasant-tastin
CREMOMYCIN can answer the call for help. It can b
counted on to consolidate fluid stools, soothe inte
tinal inflammation, inhibit enteric pathogens, ar
detoxify putrefactive materials — usually within
few hours.

CREMOMYCIN combines the bacteriostatic agent
succinylsulfathiazole and neomycin, with the a
sorbent and protective demulcents, kaolin and pe
tin, for comprehensive control of diarrhea.

INDICATIONS: Diarrhea.

CONTRAINDICATIONS: Do not use in intestinal obstruction, e
tensive ulceration of bowel, or diverticulosis; in hypersensitiv
to sulfonamides or neomycin; in pregnancy at term, in prematu
infants, or during first week of life in the newborn.

WARNINGS: Use only after critical appraisal in patients wi
hepatic or renal damage, urinary obstruction, or blood dyscr
sias. Fatal hypersensitivity reactions and blood dyscrasias
ported with use of sulfonamides. Consider periodic blood coun
hepatic and renal function tests during intermittent or chror
use.

PRECAUTIONS: Succinylsulfathiazole: Use with caution if the
is history of significant allergies and/or asthma. Continued u
requires supplementary vitamins B_1 and K. *Neomycin:* Watch

your ℞ for Cremomycin can provide relief



are-like neuromuscular block during anesthesia if neomycin used preoperatively in large doses when renal function is r; watch for overgrowth of nonsusceptible organisms. Con- er possibility of ototoxicity and nephrotoxicity with prolonged h dosage.

E EFFECTS: As with all sulfonamides: Headache, malaise, an- xia, G.I. symptoms, hepatitis, pancreatitis, blood dyscrasias, ropathy, drug fever, rash, conjunctival and scleral injection, echiae, purpura, hematuria, and crystalluria have been noted. luced fecal output of thiamine and decreased synthesis of min K have been reported. *Neomycin:* Nausea, loose stools.

ore prescribing or administering, read package circular with duct or available on request.

omptly relieves diarrheal distress

Cremomycin®

NTIDIARRHEAL

nposition: Each 30 cc. contains neomycin sulfate 300 mg. uivalent to 210 mg. of neomycin base), succinylsulfathiazole Gm., colloidal kaolin 3.0 Gm., pectin 0.27 Gm.

MERCK SHARP & DOHME Division of Merck & Co., Inc., West Point, Pa.

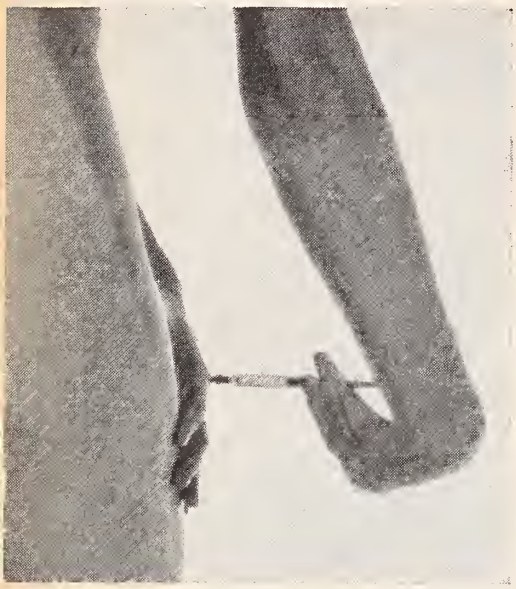
ere today's theory is tomorrow's therapy

New
low-cost tetracycline/antifungal therapy

for broad-spectrum activity
plus specific antifungal prophylaxis
at significant patient savings

Whenever tetracycline is indicated in these candidates for Candida:

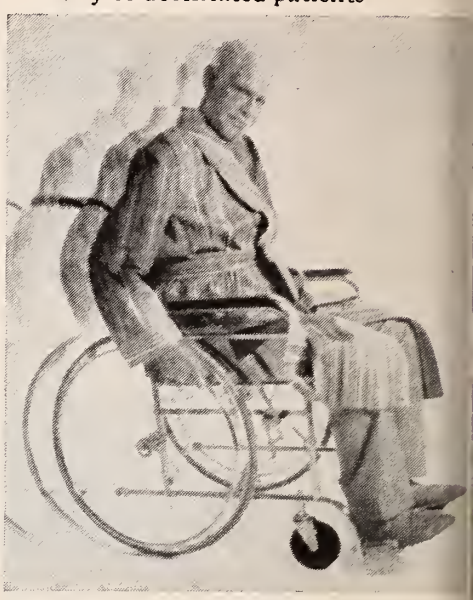
1. diabetic patients



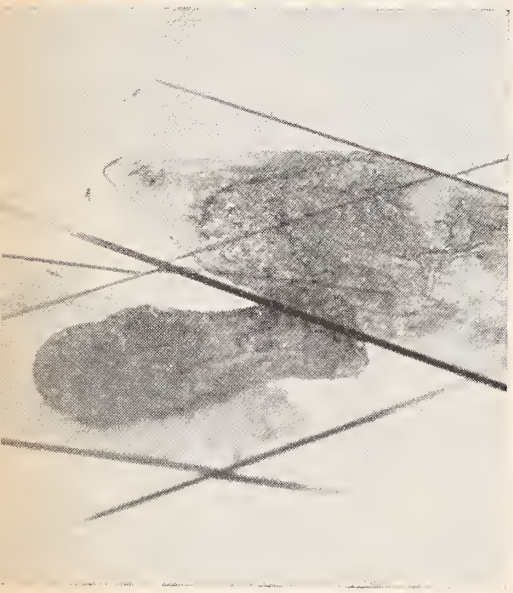
2. nonpregnant women with a history of recent or recurrent monilial vaginitis



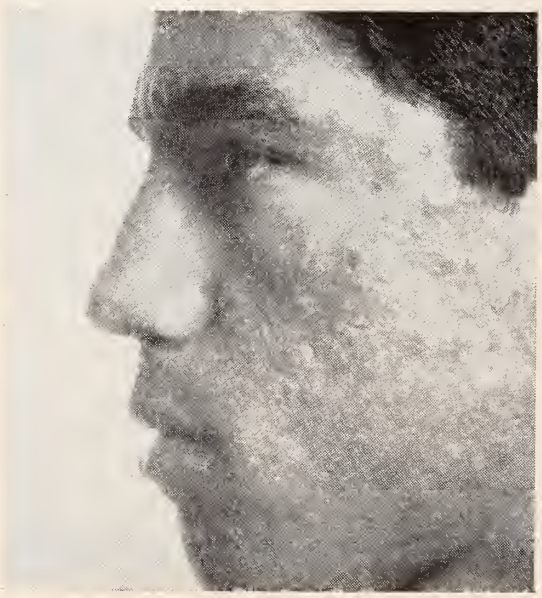
3. elderly or debilitated patients



4. patients with a past history of moniliasis



5. patients on long-term tetracycline or corticosteroid therapy



BRISTOL THERAPEUTIC SUMMARY: For complete information consult Official Package Circular. *Indications:* Infections of respiratory, gastrointestinal and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms, in patients with increased susceptibility to monilial infections. *Contraindications:* The drug is contraindicated in patients hypersensitive to its components. *Warnings:* Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower dose should be used. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood). *Precautions.* Bacterial superinfection may occur. Infants may develop increased intracranial pressure with bulging fontanels. In gonorrheal therapy, serologic tests for syphilis should be conducted initially and monthly for 3 months. *Adverse Reactions:* Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis, and allergic reactions may occur. *Usual Adult Dosage:* 1 capsule *q.i.d.* Continue therapy for 10 days in beta-hemolytic streptococcal infections. Administer one hour before or 2 hours after meals. *Supply:* Capsules, bottles of 16. Each capsule contains tetracycline phosphate complex equivalent to 250 mg. tetracycline HCl activity and 250,000 units of nystatin.

BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York

Tetrex-F®

Each capsule contains tetracycline phosphate complex equivalent to tetracycline hydrochloride 250 mg. and nystatin 250,000 units.

Tetrex-F is priced lower than most tetracycline-antifungal products.



Paul B. Jarrett, M.D.

A MATTER OF DISCIPLINE AND MORALE

We had a floor supervisor at the old Broad Street Hospital in Philadelphia who straightened out my thinking on numerous occasions.

In those days the house staff, as well as the nurses, got to their feet when a staff member appeared.

One day a physician, who did not enjoy the respect and approbation of the medical community, arrived on the floor and I decided to ignore him. A tug on my sleeve by the floor supervisor brought me to my feet. Later, I expressed the opinion that this was a time consuming, demeaning and archaic custom that required obeisance to some individuals who deserved contempt. She said that when a soldier salutes an officer, he is not announcing that this is a superior being, he is paying respect to higher authority, which, in the final analysis, is invested in the people. When we get to our feet when a doctor arrives, we are paying respect to the Healing Power he represents, which, in the final analysis, is invested in the Almighty. When this respect is shown, there is good esprit de corps and high morale, and this is reflected in greater efficiency of the serving unit.

It was her further observation that as far as doctors go, the average one couldn't care less about whether anyone rose when he hove into view, but he did care about the quality of care that his patients received, and the one was generally a reflection of the other.

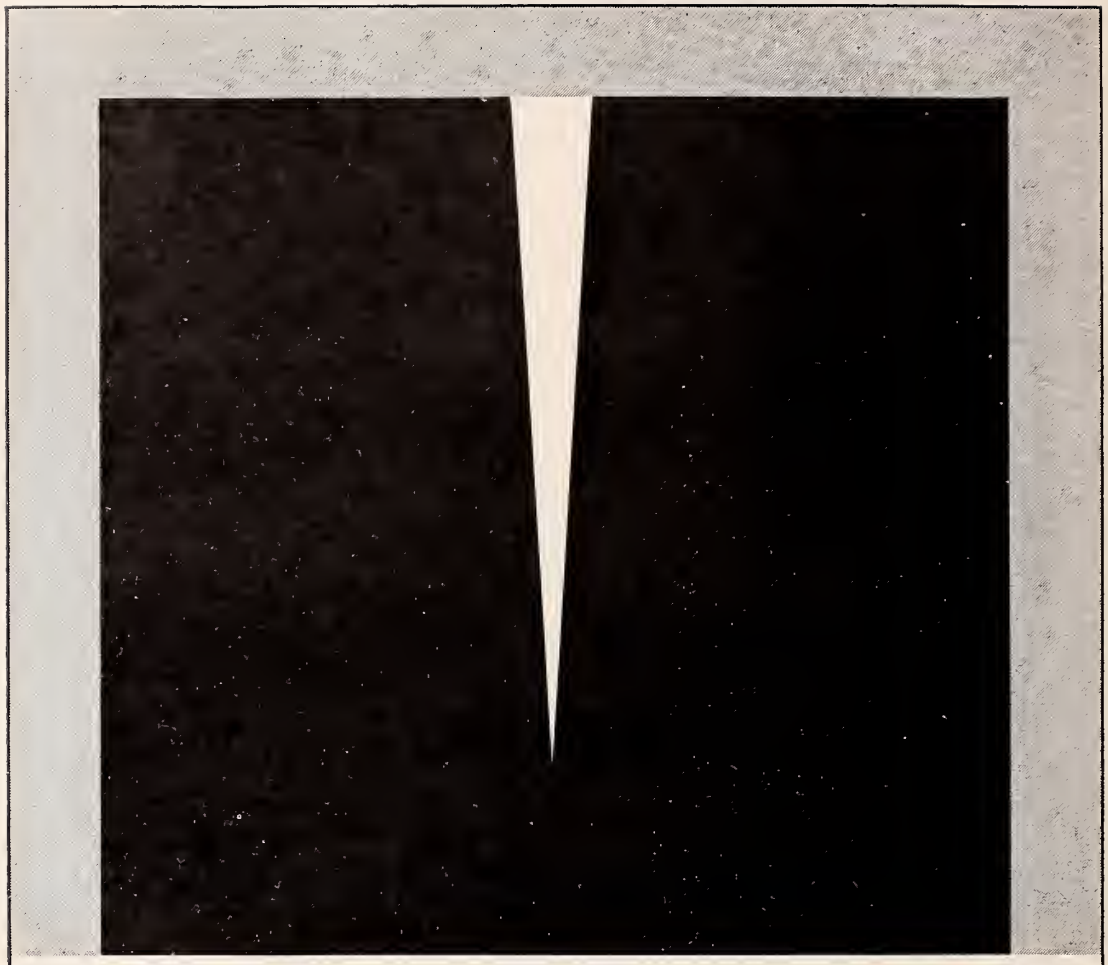
She had rather fixed ideas about interns' uniforms and shoes, as well as the wearing of the cap and her nurses' appearance; and a period of instruction at her side, whether the subject was medical or concerning ethics or morale, was apt to stay with you. Lucky was the patient who was assigned to her floor and fortunate were we who came under her tutelage.

I asked her once why, since I was a doctor even though an intern, she didn't get to her feet when I came around? She asked me if I ever knew of a hen who had hatched a chick while standing?

She had the belief that a physician while performing his office, regardless of his personal life or convictions, "had the hand of God on his shoulder."

I'm sure that she did.

Paul B. Jarrett, M.D.



incisive

A good way to describe 'Stelazine'. It's different from the tranquilizers that sedate and dull your anxious patients. Its antianxiety effect is direct. On 'Stelazine', your patients can be calmed yet remain alert.

And 'Stelazine' offers additional benefits. Dependence has not been reported. At low doses, side effects are minimal. Its b.i.d. dosage is convenient and economical.

Stelazine®

brand of **trifluoperazine**

The following is a brief precautionary statement. Before prescribing, the physician should be familiar with the complete prescribing information in SK&F literature or *PDR*. *Contraindications:* Comatose or greatly depressed states due to C.N.S. depressants and in cases of existing blood dyscrasias, bone marrow depression and liver damage. *Precautions:* Use with caution in angina patients and in patients with impaired cardiovascular systems. Antiemetic effect may mask symptoms of other disorders. An additive depressant effect is possible when used with other C.N.S. depressants. Prolonged administration of high doses may result in accumulative effects with severe C.N.S. or vasomotor symptoms. Use in pregnant patients only when necessary for the patient's welfare. *Side Effects:* Occasional cases of mild drowsiness, dizziness, mild skin reactions, dry mouth, insomnia and amenorrhea. Neuromuscular (extrapyramidal) reactions (motor restlessness, dystonias, pseudo-parkinsonism) may occur and, in rare instances, may persist. In addition, muscular weakness, anorexia, rash, lactation, hypotension, and blurred vision have been observed. Blood dyscrasias and cholestatic jaundice have been extremely rare.

For a comprehensive presentation of 'Stelazine' prescribing information and side effects reported with phenothiazine derivatives, please refer to SK&F literature or *PDR*.

Smith Kline & French Laboratories, Philadelphia SK&F

Dear Doctor:

■ Please take 3 minutes to fill out the reverse side of this survey post-card for your Journal



TEAR OUT AND MAIL !

FIRST CLASS
Permit No. 322
Scottsdale, Arizona

BUSINESS REPLY MAIL
NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES

POSTAGE WILL BE PAID BY—

THE ARIZONA MEDICAL ASSOCIATION, INC.
Suite 201
4601 North Scottsdale Road
Scottsdale, Arizona 85251

Thank you!

please **FILL IN READERSHIP SURVEY**

● **TEAR OUT POSTCARD AND MAIL**

What is your specialty?_____

What is your secondary specialty?_____

In what size town do you practice?

☐ Under 50,000 ☐ 50,000-100,000 ☐ 100,000-250,000 ☐ Over 250,000

What is your age?

☐ Under 40 ☐ 40-60 ☐ Over 60

How much time do you devote to each issue of this journal?

☐ Under 15 min. ☐ 15 min. to 1 hr. ☐ Over 1 hr.

Do you maintain this journal in a permanent file?

☐ Yes ☐ No

What features of this journal do you regularly read?

Do you see pharmaceutical detailmen

☐ Regularly? ☐ Seldom? ☐ Never?

Do you read pharmaceutical mail

☐ Regularly? ☐ Seldom? ☐ Never?

A Teaching Hospital — II

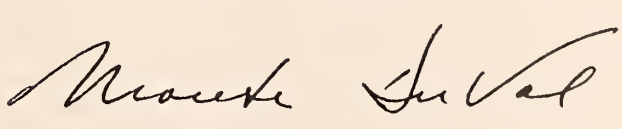
Generally, when physicians consider the question of ownership of a hospital by a medical school they tend to focus on the problems which may be created by such an arrangement. At least three of these problems warrant a review here. First, the operation of a teaching hospital costs money, especially since the clinical teaching load which is "serviced" by such a hospital may take origin from within any county in the state and the load is often indigent in character. Second, it stretches the local supply of nurses and other health-trained personnel, since these persons ordinarily come from a pool of relatively fixed size within commuting distance of the hospital. As a result, the wage scale increases and this, in turn, elevates the per diem cost of the hospital bed. Third, there are some who feel that a university hospital may jeopardize the underlying economics of both hospital and professional practice by drawing patients away from the private sector.

Naturally, we should all be concerned about the expenses which may be involved in the operation of any hospital. However, this question should be examined in its proper context and perspective. The operating expenses of a teaching hospital can be attributed to two functions: the instructional budget and the patient-care budget. The instructional budget is the purchase of instructional time and is not related to the question of who owns the hospital. Similarly, the cost of caring for the patients who are participating in the teaching program has to be met somewhere in the state. In other words, this portion of the expense is already being met. The establishment of a teaching hospital simply brings these expenses together and puts them under one roof.

The objection which relates to the increased per diem cost which may follow the opening of new hospital beds is a very realistic one. However, this too must be kept in perspective. In other words, it may follow the opening of new hospital beds in any community and is not related, per se, to whether or not the beds are "teaching" beds. Therefore, our concern must be with the degree to which the educational requirements of the medical school are, or are not, synonymous with the community requirements for the hospital beds. To the extent that they are synonymous, we have no problem. Where they are different there must be additional hospital beds. In Tucson, a survey of health facilities was recently completed by its Hospital Planning Council. The survey clearly showed that the average number of short-term hospital beds in non-federal hospitals per thousand persons in this community has not kept pace with the national average. As a result, Tucson has a very high utilization rate for its hospital beds. There is no evidence that the existing and demonstrated requirements for hospital beds in Tucson will decrease. Therefore, some additional beds will be required in Tucson before long. When one further considers that a substantial portion of the clinical requirements of the medical school will be oriented to the state, rather than to Tucson ,then to this extent our requirements are not synonymous with those in the community and new beds are necessary on those grounds as well.

The fear that a university hospital may draw patients away from the private sector is of very real concern to some, in spite of favorable experience which other communities have reported with respect to this question.

As examples; when university hospitals opened in Gainesville, Florida; Lexington, Kentucky; Jackson, Mississippi; Morgantown, West Virginia and Winston-Salem, North Carolina the occupancy rates of adjacent community hospitals were not depressed. Rather, the effect of opening the university hospital was to increase the demand for patient services. In other words, it appears this particular fear is not only unsubstantiated but may instead have an effect which is the reverse of the one which is usually stated.



PRINCIPLES OF MEDICAL ETHICS

Preamble. — These principles are intended to aid physicians individually and collectively in maintaining a high level of ethical conduct. They are not laws but standards by which a physician may determine the propriety of his conduct in his relationship with patients, with colleagues, with members of allied professions, and with the public.

Section 1. — The principal objective of the medical profession is to render service to humanity with full respect for the dignity of man. Physicians should merit the confidence of patients entrusted to their care, rendering to each a full-measure of service and devotion.

Section 2. — Physicians should strive continually to improve medical knowledge and skill, and should make available to their patients and colleagues the benefits of their professional attainments.

Section 3. — A physician should practice a method of healing founded on a scientific basis; and he should not voluntarily associate professionally with anyone who violates this principle.

Section 4. — The medical profession should safeguard the public and itself against physicians deficient in moral character or professional competence. Physicians should observe all laws, uphold the dignity and honor of the profession and accept its self-imposed disciplines. They should expose, without hesitation, illegal or unethical conduct of fellow members of the profession.

Section 5. — A physician may choose whom he will serve. In an emergency, however, he should render service to the best of his ability. Having undertaken the care of a patient, he may not neglect him; and unless he has been discharged he may discontinue his services only after giving adequate notice. He should not solicit patients.

Section 6. — A physician should not dispose of his services under terms or conditions which tend to interfere with or impair the free and complete exercise of his medical judgment and skill or tend to cause a deterioration of the quality of medical care.

Section 7. — In the practice of medicine a physician should limit the source of his professional income to medical services actually rendered by him, or under his supervision, to his patients. His fee should be commensurate with the services rendered and the patient's ability to pay. He should neither pay nor receive a commission for referral of patients. Drugs, remedies or appliances may be dispensed or supplied by the physician provided it is in the best interests of the patient.

Section 8. — A physician should seek consultation upon request; in doubtful or difficult cases; or whenever it appears that the quality of medical service may be enhanced thereby.

Section 9. — A physician may not reveal the confidences entrusted to him in the course of medical attendance, or the deficiencies he may observe in the character of patients, unless he is required to do so by law or unless it becomes necessary in order to protect the welfare of the individual or of the community.

Section 10. — The honored ideals of the medical profession imply that the responsibilities of the physician extend not only to the individual, but also to society where these responsibilities deserve his interest and participation in activities which have the purpose of improving both the health and the well-being of the individual and the community.

ARIZONA MEDICINE

Roland F. Schoen, M.D. **Editor**
Mr. Bruce E. Robinson **Managing Editor**
Mrs. Evelyn Kuebler **Editorial Assistant**

ASSISTANT EDITORS
Original Articles

Mayer Hyman, M.D. — Preston J. Taylor, M.D.
Kenneth Johnson, M.D. — Robert F. Lorenzen, M.D.

Editorial Section

R. Lee Foster, M.D. — William B. McGrath, M.D.
John R. Green, M.D. — Leslie B. Smith, M.D.
John W. Kennedy, M.D.

ASSOCIATE EDITORS

Earl J. Baker, M.D. Civil Defense
Max Baumeister, Jr., M.D. Anesthesiology
Chester G. Bennett, M.D. General Surgery
William E. Crisp, Jr., M.D. Obstetrics and Gynecology
Philip E. Dew, M.D. Pediatrics
Charles W. Elkins, M.D. Neurosurgery
Eugene Leibsohn, M.D. Dermatology
James D. Nauman, M.D. .. Medical Society of U.S. & Mexico
William M. Hindman, M.D. Pathology
C. Thomas Read, M.D. Thoracic Surgery
Wallace A. Reed, M.D. Medical Economics
Paul L. Singer, M.D. Genito-Urinary
George A. Spendlove, M.D. Public Health
Alvin L. Swenson, M.D. Orthopedics
William G. Ure, M.D. Tuberculosis

Editorials of Arizona Medicine are the opinions of the authors and do not necessarily represent the official stand of The Arizona Medical Association, Inc. The opinions of the Board of Directors may be sought in the published proceedings of that body.

Address all correspondence to the
Journal Offices
4601 N. Scottsdale Rd., Scottsdale, Ariz. 85251

Bruce E. Robinson
Business Manager

National Representative
State Journals West
Melvin B. Tyler, Advertising Manager
693 Sutter Street
San Francisco, California 94102

"The material in this journal is not copyrighted. We ask that anyone using material from it note the previous publication in ARIZONA MEDICINE."

CONTRIBUTIONS

The Editor sincerely solicits contributions of scientific articles for publication in ARIZONA MEDICINE. All such contributions are greatly appreciated. All will be given equal consideration.

Material submitted for publication in ARIZONA MEDICINE should conform to the following policies:

1. Manuscripts, including references or bibliography, should be typewritten, double-spaced, on one side of the paper only, and the original and a carbon enclosed.
2. Be guided by the general rules of medical writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.
3. Although the Editors try to catch inaccuracies, the ultimate responsibility is the author's.
4. Articles are accepted for publication only if they are contributed exclusively to this Journal. Ordinarily, contributors will be notified within 60 days if a manuscript is accepted for publication. Every effort will be made to return unused manuscripts.
5. The Journal reserves the right to edit all material.
6. Reprints will be supplied to the author at printing cost.

Identi-Code



In these days of progressive government regulations when we no longer need or are permitted to think exclusively of or for ourselves, it is refreshing and gratifying to see a privately owned, independent, non-subsidized, profit-making organization develop regulations pertaining to the standardization, identification, and distribution of its own manufactured product without stimulation or coercion by any agency, regulation or law except its own conscience and merchandising ability.

Congratulations to Eli Lilly and Company for their Identi-Code system of positive product identification.

This new system consists of a combination of one letter and two numerals which specify the form and formula of Lilly medications when reference is made to a Lilly Identi-Code Index, copies of which are already being distributed to all individuals and agencies dealing in medicine and medical emergencies.

It would be superfluous to mention the many indications for a system such as this; rapid identification of an agent in just one case of misuse or overdosage would be indication enough, but the value of any identification system whatsoever is imperative because of the fact that today more than one thousand companies manufacture a plain white unidentified tablet — each containing a variety of formulations — and each having a different therapeutic indication.

Roland F. Schoen, M.D.
Editor


only one in the morning
and one in the evening

Now b.i.d. convenience plus even greater patient savings over q.i.d. tetracycline therapy

(plus all the advantages of tetracycline phosphate complex)

new Tetrex bidCAPS™*

(tetracycline phosphate complex)

Maximum patient savings. New bidCAPS now enable you to prescribe tetracycline in an even more economical, more convenient form. Your patient's prescription dollar gets maximum value: a daily bidCAPS dose is priced lower than any other leading brand of tetracycline—b.i.d. or q.i.d.

Well tolerated. Tetrex (tetracycline phosphate complex) is well tolerated. Gastrointestinal side effects are few; photodynamic reactions are extremely rare.

More of the active antibiotic in the blood. The basic tetracycline in Tetrex (tetracycline phosphate complex) is less bound to serum protein than is demethylchlortetracycline.[1] Result: Tetrex (tetracycline phosphate complex) provides a higher percentage of active antibiotic in the blood.

Available in bottles of 16 and 50.

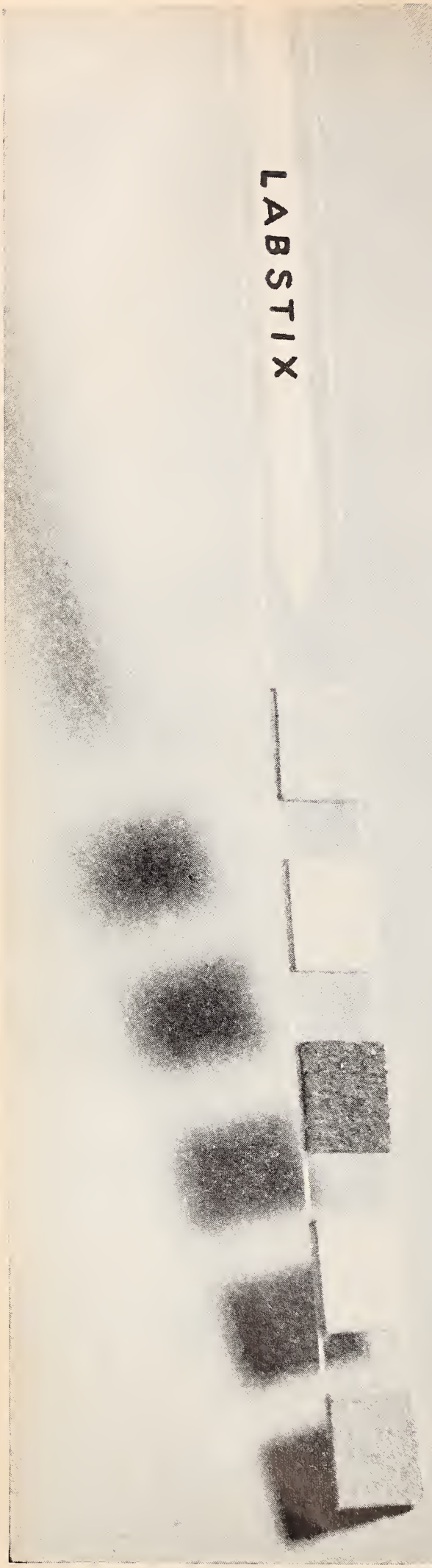
BRISTOL

BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York

BRISTOL THERAPEUTIC SUMMARY: For complete information consult Official Package Circular. *Indications:* Infections of respiratory, gastrointestinal and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms. *Contraindications:* The drug is contraindicated in individuals hypersensitive to tetracycline. *Warnings:* Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood). *Precautions:* Mycotic or bacterial superinfection may occur. Infants may develop increased intracranial pressure with bulging fontanels. In gonorrheal therapy, serologic tests for syphilis should be conducted initially and monthly for 3 months. *Adverse Reactions:* Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis and allergic reactions may occur. *Usual Adult Dose:* 500 mg. b.i.d. Continue therapy for 10 days in beta-hemolytic streptococcal infections. Administer one hour before or two hours after meals.

Reference: 1. Roberts, C. E., Jr.; Perry, D. M.; Kuharic, H. A., and Kirby, W. M. M.: A. M. A. Arch. Int. Med. 107:204 (Feb.) 1961.

*Each bidCAP contains: Tetrex (tetracycline phosphate complex equivalent to 500 mg. tetracycline HCl activity).



new from Ames
5 basic uro-analytical facts in 30 seconds

Labstix®

BRAND REAGENT STRIPS

...broadest urine screening possible from a single reagent strip

Urine test results with LABSTIX Reagent Strips can represent significant guides to differential diagnosis or therapy in many conditions. An unexpected "positive" may enable you to detect hidden pathology—long before more recognizable symptoms become evident. Negative results, which permit you to rule out abnormalities in a broad clinical range, can serve as baseline values for reference in future examinations. The 5 colorimetric test areas encompassed on LABSTIX Reagent Strips are:

pH—values are read numerically in the essential range of pH 5 to pH 9.

Protein—results are read either in the "plus" system or in mg. % in amounts approximating "trace," 30, 100, 300, and over 1000 mg. %.

Glucose—provides a "Yes-or-No" answer for urine "sugar spill."

Ketones—detects ketone bodies in urine—**both** acetoacetic acid and acetone. Reacts with as little as 5 to 10 mg. % of acetoacetic acid.

Occult Blood—specific test for intact red cells, hemoglobin or myoglobin. Results are read as negative, small, moderate or large amounts.

Now a Clear Reagent Strip of Firm Construction

...facilitates handling during testing procedure. Excellent color contrast made possible by the clear plastic strip, together with the clearly defined color charts provided, permits precise, reproducible colorimetric readings in all 5 test areas. A more definitive interpretation of uro-analytical facts is made possible.

Available: LABSTIX Reagent Strips, bottles of 100 (color charts are supplied with each bottle).

Ames Company, Inc., Elkhart, Indiana

AMES

08165

MEDICAL ETHICS

A CONTINUATION

John W. Kennedy, M. D.

SECTION 3

A physician should practice a method of healing founded on a scientific basis: and he should not voluntarily associate professionally with anyone who violates this principle.

SECTION 4

The medical profession should safeguard the public and itself against physicians deficient in moral character or professional competence. Physicians should observe all laws, uphold the dignity and honor of the profession and accept its self-imposed disciplines. They should expose, without hesitation, illegal or unethical conduct of fellow members of the profession.

Ethics, like the weather, receives a great deal of talk therapy and complacent compliance. The professional training in medical schools is "loaded" with scientific smorgasbord, leavened later with "the art", and sprinkled with a couple of lectures on ethics.

We are directed, in the above "commandments" not to give aid and comfort to the cultists, and not to "pass by on the other side of the road" when our own members indulge in besmirching conduct. The terms – profession and doctor – have now been denuded of the aura – said to have, in the past, surrounded the physician and the art. Things are not as they were – in the good old days – in fact they never were.

As the accessory paraphernalia of medicine demands more technical ancillary forces, so the personal "art of medicine" or bedside medicine tends to recede. It is especially desirable, that we stimulate the laggard, and flag down the few of our own members who skirt the margins of decent personal and professional conduct.

When one incompetent practitioner is recognized, all of us as individuals resent the public criticism cast against us. But how well do we support our own professional committee members who must perform the chastisement? Often we hear cries of oppression, persecution, prejudice, professional jealousy, all of these roar down the hospital corridors. Now let us give equable, considered support to the properly constituted professional "watch and ward" activities. These are our own regulated methods of protection.

With the advent of Medicare let doctors everywhere be bold, decisive, and with earthy honesty avoid the charlatans and support our stalwarts. Ethics and decent behavior have not, as yet, been abrogated by the new Federalism.



Adaptation from Shakespeare Rare Print Collection

"Give me a bowl of wine
—in this I bury
all unkindness"

—SHAKESPEARE



DEAR DOCTOR:

Will Shakespeare was a pretty fair hostler and real estate investor, a pal of Francis Drake and Walter Raleigh, much admired by Queen Elizabeth, and a tophole poet and playwright —but no physician.

Nevertheless, he had a rather good idea of the helpfulness of wine in cases of stress, as you can see above.

Like Will, we wish to recommend a daily bit of wine, with your meals for your own personal stress, Doctor, in your rugged profession.

Also, for your wife's stress at home, we'd like to prescribe a 24-page folder, "WINE COOKERY THE EASY WAY," which will help her to relax in the kitchen (and help you at the barbecue). We'll mail it to you (free) if you'll just drop us a note on your professional letterhead.

By the way, we'll also send you our newly revised 64-page booklet, "USES OF WINE IN MEDICAL PRACTICE," which summarizes a quarter century of scientific research, in America and Europe, as an aid to your profession.

We hope you will request one or both of these free booklets.

As you know, wine stimulates gastric flow; can help the convalescing patient; the patient lacking appetite; can help relieve anxiety; can help patients suffering from the malabsorption syndrome—and helps hospital and geriatric home morale. Shakespeare had a good idea there. And many physicians and hospital administrators are also sharing that idea.

Here's a toast in California wine, Doctor—to your health!

The Winemakers of California

WINE ADVISORY BOARD, 717 MARKET ST., DEPT 1, SAN FRANCISCO, CALIF. 94103



UP TO 10-12 HOURS' CLEAR BREATHING ON ONE TABLET

Dimetapp® Extentabs®

(Dimetane® [brompheniramine maleate], 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.)

In sinusitis, colds, or U.R.I., Dimetapp lets congested patients breathe easy again. Each Extentab brings welcome relief all day or all night, usually without drowsiness or overstimulation. Its key to success? The Dimetapp formula—Dimetane (brompheniramine maleate), a potent antihistamine reported in one study to have elicited side effects as few as the placebo,* teamed with decongestants phenylephrine and phenylpropanolamine—in a dependable 10- to 12-hour form.

Schiller, I. W., and Lowell, F. C.: New England J. Med. 261:478, 1959.

Contraindications: Patients hypersensitive to antihistamines. Not recommended for use during pregnancy.

Precautions: Until the patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension.

Side Effects: Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability, or excitement may be encountered.

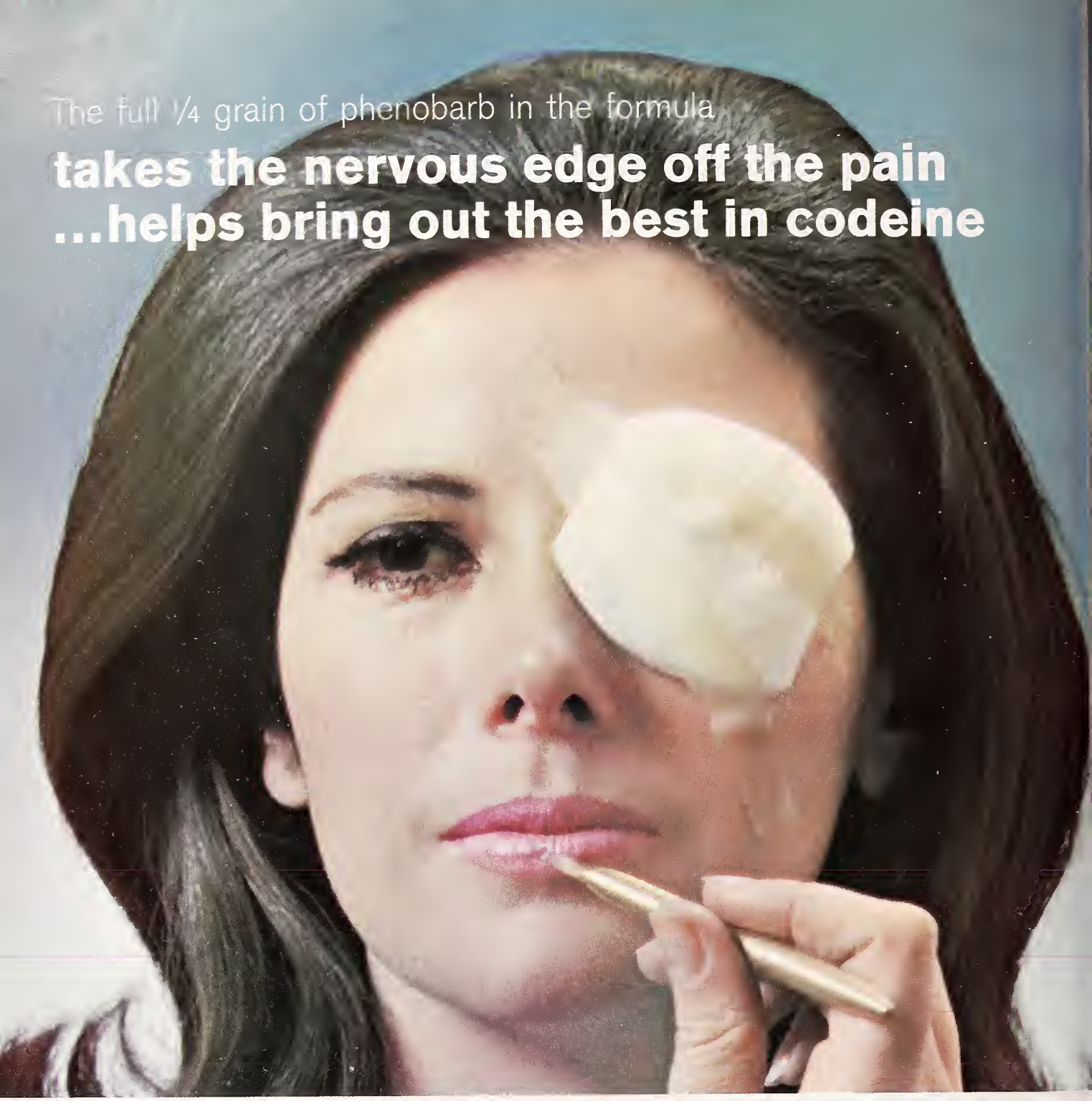
Dosage: 1 Extentab morning and evening, or as needed.

Supplied: Bottles of 100 and 500.

Also available: Dimetapp® Elixir for conventional *t.i.d.* or *q.i.d.* dosage. See package insert for further details.

A. H. ROBINS CO., INC.
RICHMOND, VIRGINIA 23220

A·H·ROBINS



Phenaphen® with Codeine

the only leading compound analgesic that calms instead of caffeinates

Each capsule contains:

Phenobarbital (¼ gr.) 16.2 mg.
(Warning: may be habit forming)
Aspirin (2½ gr.) 162.0 mg.
Phenacetin (3 gr.) 194.0 mg.
Hyoscyamine sulfate 0.031 mg.
Codeine phosphate.....¼ gr. (No. 2),
½ gr. (No. 3), 1 gr. (No. 4)
(Warning: may be habit forming)

Contraindications: Hypersensitivity to any ingredient.

Precautions: As with all phenacetin-containing products, avoid excessive or prolonged use.

Side Effects: Side effects are uncommon—nausea, constipation, and drowsiness have been reported.

A-H-ROBINS

A. H. ROBINS CO., INC., Richmond, Va. 23220

MOLECULAR REMODELING—

laboratory exercise or clinical necessity?

More than twenty-five years have passed since the discovery of the diuretic activity of sulfanilamide started pharmacologists on a succession of molecular remodelings to find the ideal diuretic.

Diuresis—a sought-after clinical effect from an unwanted side effect

It started in 1937 when a clinician reported that the administration of a sulfonamide was sometimes accompanied by an unexplainable side effect—metabolic acidosis.[1] Three years later the side effect was explained. The sulfonamide radical of sulfanilamide inhibited carbonic anhydrase,[2] the enzyme responsible for converting carbon dioxide and water to hydrogen ions and bicarbonate ions.

Later, other investigators showed by dog experiments that metabolic acidosis probably resulted when the inhibition of carbonic anhydrase upset the exchange of hydrogen and sodium ions, causing increased excretion of sodium as the bicarbonate.[3]

It was twelve long years after the first report of the unexplainable side effect (metabolic acidosis) that it was finally shown that large doses of sulfanilamide administered to edematous patients were indeed capable of promoting diuresis.[4] However, the possibility of toxic effects from its prolonged use and its relatively weak diuretic action made it impractical for clinical use as a diuretic.[5]

Because the inhibition of carbonic anhydrase seemed to be the key to effective diuresis, investigators began to look for more potent enzyme inhibitors —in the hopes that they would be more effective diuretics.

The most important of these early compounds, acetazolamide, enjoyed several years of fairly wide clinical use.

Its carbonic anhydrase inhibitory activity was several hundred times greater than that of sulfanilamide.[6] The increase in inhibitory activity, however, increased not only the excretion of sodium and bicarbonate ions, but also the excretion of potassium.[7] And, like its predecessor, acetazolamide precipitated mild acidosis. Its prolonged use could result in hypokalemic acidosis.[7]

The 'thiazides'—an answer to the metabolic acidosis caused by carbonic anhydrase inhibition

Despite the fact that the sulfonamide group appeared to be responsible for carbonic anhydrase inhibition which in turn appeared to be responsible for diuresis, investigators began to synthesize compounds with structural alterations to the sulfonamide group.

The first major breakthrough came with the synthesis of chlorothiazide. Altering the sulfonamide group did indeed alter the ability of chlorothiazide to inhibit carbonic anhydrase—it was only 1/10th as potent as acetazolamide in inhibiting the enzyme.[8] Despite the drop in inhibitory potency, however, chlorothiazide proved to be an effective diuretic—an observation that led to the conclusion that its diuretic action was due to some mechanism other than its action on carbonic anhydrase.[9,10]

For effective diuresis, chlorothiazide was administered in daily dosages ranging from 250 to 2000 mg.[11] It increased the excretion of sodium and chloride; and, to a lesser extent, potassium and bicarbonate.[11] The excretion of potassium appeared to be maximal at higher dose levels at which, theoretically, the carbonic anhydrase inhibitory effect is more active.[11] Its prolonged use, therefore, could sometimes result in metabolic hypokalemic, hypochloremic alkalosis.[7]

Naturetin—effective diuresis with more favorable electrolyte balance

Other thiazides followed—with improvements being aimed at two particular areas: 1. attempts to increase diuretic action in relation to the milligram potency of the drug, and 2. attempts at a more favorable sodium/potassium ratio in the urine, i.e., to decrease the excretion of potassium while maintaining the excretion of sodium.[12]

One of these, Naturetin, Squibb Bendroflumethiazide, has made advances on both these points. "By adding a 3-benzyl radical to hydroflumethiazide a rather dramatic reduction in dose range is accomplished. With this drug, effective sodium excretion is obtained with doses between 2.5 and 10 mg., which is a 200 to 1 ratio as compared to chlorothiazide..."[13]

Moreover, due probably to its virtual lack of carbonic anhydrase inhibition, Naturetin (bendroflumethiazide) has been shown to cause less potassium and bicarbonate loss and less alteration in urinary pH than either chlorothiazide or hydrochlorothiazide.

Naturetin is outstandingly effective not only in establishing, but also in maintaining, excretion of retained fluid in edematous patients. And its duration of action is sufficiently prolonged to allow a single daily administration in most patients. Naturetin is also an effective antihypertensive agent.

Contraindications: Severe renal impairment; previous hypersensitivity.

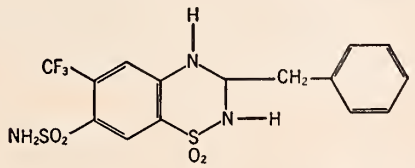
Warning: Ulcerative small bowel lesions have occurred with potassium-containing thiazide preparations or with enteric-coated potassium salts supplementally. Stop medication if abdominal pain, distension, nausea, vomiting, or G.I. bleeding occur.

Precautions: The dosage of ganglionic blocking agents, veratrum, or hydralazine when used concomitantly must be reduced by at least 50% to avoid orthostatic hypotension. Electrolyte disturbances are possible in cirrhotic or digitalized patients.

Side Effects: Bendroflumethiazide may cause increases in serum uric acid, unmask diabetes, increase glycemia and glycosuria in diabetic patients and may cause hypochloremic alkalosis, hypokalemia; cramps, pruritus, paresthesias, and rashes may occur.

Supplied: Naturetin (Squibb Bendroflumethiazide) 5 mg. and 2.5 mg. tablets. Also available Naturetin c K [Squibb Bendroflumethiazide (5 or 2.5 mg.) with Potassium Chloride (500 mg.)]. For full information, see Product Brief.

References: **1.** Southworth, H.: Proc. Soc. Exper. Biol. & Med. *36*:58, 1937. **2.** Mann, T. and Keilin, D.: Nature *146*:164, 1940. **3.** Pitts, R. F., and Alexander, R. S.: Am. J. Physiol. *144*:239, 1945. **4.** Schwartz, W. B.: New England J. Med. *240*:173, 1949. **5.** Friedberg, C. K., in Moyer, J. H., and Fuchs, M.: Edema Mechanisms and Management, Philadelphia, W. B. Saunders Co., 1960, p. 259. **6.** Cumming, J. R.; Tabachnick, E., and Seelig, M., in Moyer, J. H., and Fuchs, M.: op. cit., p. 254. **7.** Werko, L., in Moyer, J. H., and Fuchs, M.: op. cit., p. 188. **8.** Beyer, K. H., Jr., in Moyer, J. H., and Fuchs, M.: op. cit., p. 274. **9.** Maren, T. H., and Wiley, C. E.: J. Pharmacol. & Exper. Therap. *143*:230, 1964. **10.** Earley, L. E., and Orloff, J.: Ann. Rev. Med. *15*:149, 1964. **11.** Fuchs, M., and Mallin, S. R., in Moyer, J. H., and Fuchs, M.: op. cit., p. 276. **12.** Ford, R. V., in Moyer, J. H., and Fuchs, M.: op. cit., p. 290. **13.** cited in Fuchs, M., and Mallin, S. R. (ref. 11): op. cit., p. 283.



Naturetin®
SQUIBB BENDROFLUMETHIAZIDE
to reduce excess fluid
or high blood pressure

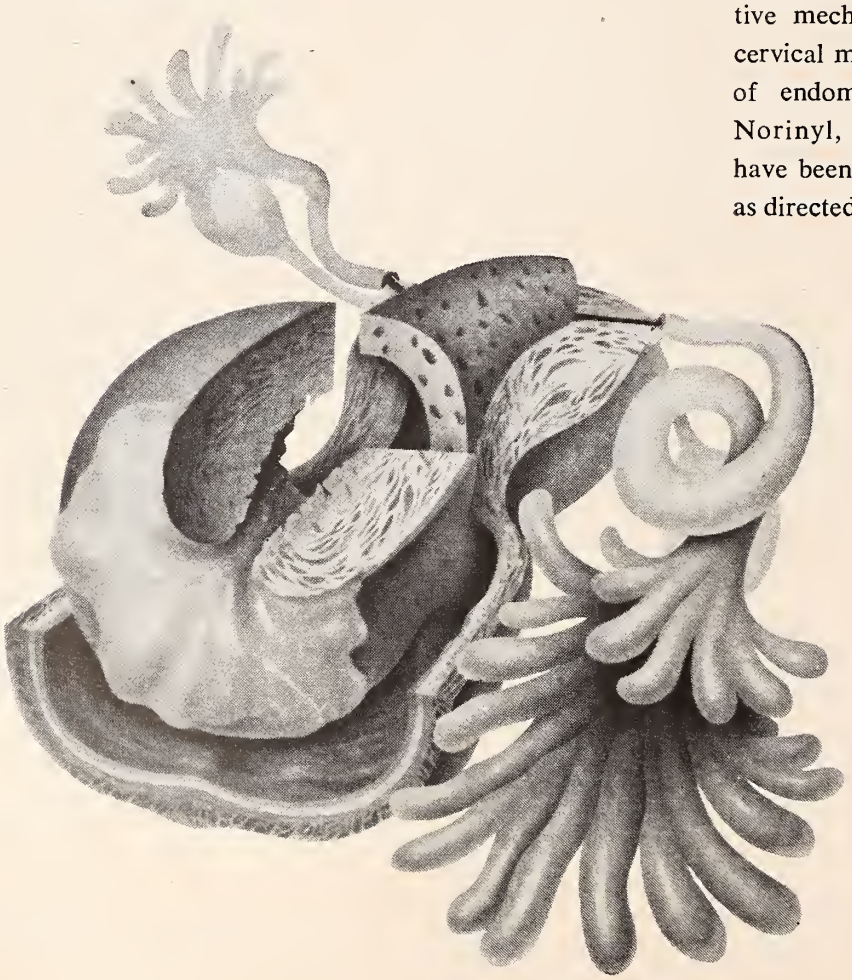
Norinyl® tablets
(norethindrone 2 mg. & mestranol 0.1 mg.)

for multiple contraceptive action that has produced a record of unexcelled effectiveness

inhibition of ovulation by means of 2 time-proved hormonal agents

production of a cervical mucus hostile to sperm motility and vitality

creation of an endometrium unreceptive to egg implantation



no unplanned pregnancies

Norinyl provides multiple action for maximum assurance of success. It does not depend on ovulation inhibition alone for contraceptive effectiveness. The mechanism of action of combined hormonal therapy results in ovulation inhibition reinforced by other protective mechanisms, including a hostile cervical mucus[1-13] and an acceleration of endometrial changes.[1-3,7-16] With Norinyl, no unplanned pregnancies have been reported to date when used as directed.

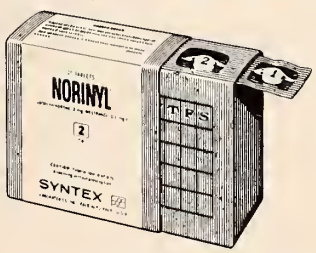
plus important supportive benefits that help her through those critical early months of oral contraception

low incidence of side effects

Low incidence of BTB and spotting, nausea and amenorrhea tends to minimize side effect problems and increases patient cooperation.

no confusion about dosage

An unbreakable "confusionproof" package makes it easy to adhere to prescribed dosage schedule: individually sealed tablets numbered from 1 through 20 *plus* monthly calendar record enables patient to double-check dosage intake by day and corresponding tablet number.



Contraindications: Thrombophlebitis or pulmonary embolism (current or past). Existing evidence does not support a causal relationship between use of Norinyl and development of thromboembolism. While a study which was conducted does not resolve definitively the possible etiologic relationship between progestational agents and intravascular clotting, it tends to confirm the findings of the Ad Hoc Advisory Committee appointed by the Food and Drug Administration to review this possibility. Cardiac, renal or hepatic dysfunction. Carcinoma of the breast or genital tract. Patients with a history of psychic depression should be carefully studied and the drug discontinued if depression recurs to marked degree. Patients with a history of cerebral vascular accident.

Warning: Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions, medication should be withdrawn.

Precautions: By May 1963, experience with norethindrone 2 mg.—mestranol 0.1 mg. had extended over 24 months. Through miscalculation, omission or error in taking the recommended dosage of Norinyl, pregnancy may result. If regular menses fail to appear and treatment schedule has not been adhered to, or if patient misses two menstrual periods, possibility of pregnancy should be resolved before resuming Norinyl. If pregnancy is established, Norinyl should be discontinued during period of gestation since virilization of the female fetus has been reported with oral use of progestational agents or estrogen. When lactation is desired, withhold Norinyl until nursing needs are establlshed. Existing uterine fibroids may increase in size. In metabolic or endocrine disorders, careful clinical preevaluation is indicated. A few patients without evidence of hyperthyroidism had elevated serum protein-bound iodine levels, which in the light of present knowledge, does not necessarily imply hyperthyroidism. Protein-bound iodine increased following estrogen administration. Bromsulphalein retention has occurred in up to 25% of patients without evidence of hepatic dysfunction. Studies from 24-hour urine collections have shown an increase in aldosterone and 17-ketosteroids and decrease in 17-hydroxycorticoid levels. Thus, Norinyl should be discontinued prior to and during thyroid, liver or adrenal function tests. Because progestational agents may cause fluid retention, conditions such as epilepsy, migraine and asthma require careful observation. Thus far no deleterious effect on pituitary, ovarian or adrenal function has been noted; however, long-range possible effect on these and other organs must await more prolonged observation. Norinyl should be used with caution in patients with bone, renal or any disease involving calcium or phosphorus metabolism.

Side Effects: Intermenstrual bleeding; amenorrhea; symptoms resembling early pregnancy, such as nausea, breast engorgement or enlargement, chloasma and minor degree of fluid retention (if these should occur and patient has not strictly adhered to medication plan, she should be tested for pregnancy); weight gain; subjective complaints such as headache, dizziness, nervousness, irritability; in a few patients libido was increased. In a total of 3,090 patients, 2.2% discontinued medication because of nausea.

NOTE: See sections on contraindications and precautions for possible side effects on other organ systems.

Dosage and Administration: One Norinyl tablet orally for 20 days, commencing on day 5 through and including day 24 of the menstrual cycle. (Day 1 is the first day of menstrual bleeding.)

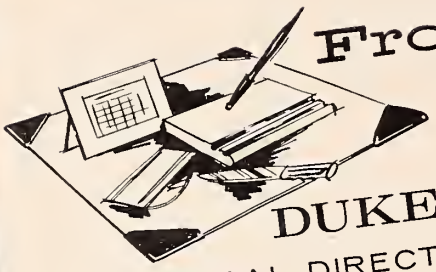
Availability: Dispensers of 20 and 60 tablets; bottles of 100.

References: **1.** Council on Drugs. JAMA 187:664 (Feb. 29) 1964. **2.** Bryans, F. E.: Canad Med Ass J 92:287 (Feb. 6) 1965. **3.** Goldzieher, J. W.: Med Clin N Amer 48:529 (Mar.) 1964. **4.** Cohen, M. R.: Paper presented at Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965. **5.** Hammond, D. O.: Ibid. **6.** Rice-Wray, E., Goldzieher, J. W., and Aranda-Rosell, A.: Fertil Steril 14:402 (Jul.-Aug.) 1963. **7.** Goldzieher, J. W., Moses, L. E., and Ellis, L. T.: JAMA 180:359 (May 5) 1962. **8.** Kempers, R. D.: GP 29:88 (Jan.) 1964. **9.** Tyler, E. T.: JAMA 187:562 (Feb. 22) 1964. **10.** Rudel, H. W., Martinez-Manautou, J., and Maqueo-Topete, M.: Fertil Steril 16:158 (Mar.-Apr.) 1965. **11.** Flowers, C. E., Jr.: N Carolina Med J 25:139 (Apr.) 1964. **12.** Goldzieher, J. W.: Appl Ther 6:503 (June) 1964. **13.** The Control of Fertility. Report adopted by the Committee on Human Reproduction of the American Medical Association. JAMA 194:462 (Oct. 25) 1965. **14.** Flowers, C. E., Jr.: JAMA 188:1115 (June 29) 1964. **15.** Merritt, R. I.: Appl Ther 6:427 (May) 1964. **16.** Newland, D. O.: Paper presented at Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965.

norethindrone—an original steroid from
SYNTEX
LABORATORIES INC., PALO ALTO, CALIF.

Norinyl® tablets
(norethindrone 2 mg. c mestranol 0.1 mg.)

for multiple contraceptive action



From The Desk Of

DUKE GASKINS, M.D.

MEDICAL DIRECTOR, HBA LIFE INSURANCE CO.

Doctor:

We think we've achieved a record at HBA that will interest any busy doctor . . . and who isn't busy these days?

Ninety-five out of each 100 HBA medical-surgical claims are paid without lengthy claim forms.

Fewer than 5 cases out of 10 — those very special situations — might take a claim form from the doctor.

In those cases, won't you cooperate by giving it your immediate attention — realizing that HBA wouldn't request it unless it was absolutely necessary?

Thanks,

Duke

THE HBA LIFE

INSURANCE COMPANY

GROWING WITH THE ELEVEN WESTERN STATES

Donald E. Nelson, M.D.
1911-1966

Donald E. Nelson, M.D., Chairman of the state board of juvenile institutions and a member of the Safford City Council, died May 30, 1966.

Dr. Nelson, a native of Illinois, attended the University of Wisconsin and was a graduate of Rush Medical School, Chicago. He came to Arizona in 1941 and established practice in Safford.

He was a board member of the Arizona Medical Association, past president of the Arizona Academy of General Practitioners and the Graham County Medical Society, and was a charter member of the American-Mexican Medical Society.

He was a member of the board of directors of the Safford-Graham County Chamber of Commerce, and was a past president of the Copper Council, Boy Scouts of America. He was a member of the Elks, the Odd Fellows, and was a past president of the Safford Rotary Club.

Survivors include his wife, Isabell, of Safford; two sons, Nelson Story of Safford and Donald E. Nelson, Jr., in the Air Force; two daughters, Mrs. Timilie Woodruff of Carson City, Nev., and Mrs. Karen Olson, Mason City, Iowa; a brother, Dr. Warren J. Nelson of Springfield, Va.; two sisters, Mrs. Boyd Clark of Yuma and Mrs. Margaret Hobbs of Wilmington, Del.; and four grandchildren.

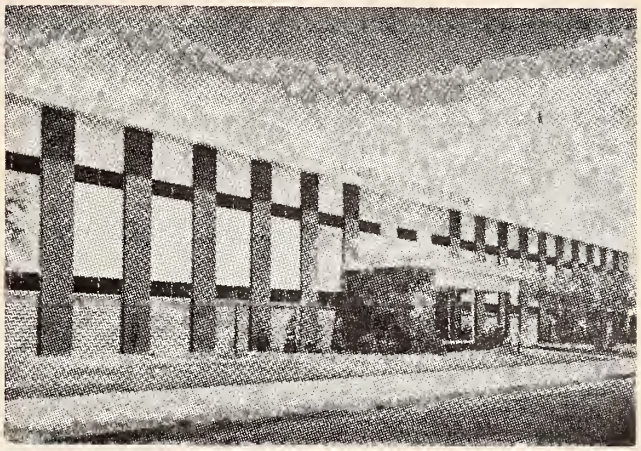
ANNOUNCEMENT

PROGRAMS OF MEDICAL INTEREST TO BE TELEVISED BEGINNING WEDNESDAY, SEPTEMBER 21, 1966 SPONSORED BY THE ARIZONA MEDICAL ASSOCIATION, INC.

(see page 663 for additional information)

Baptist Medical Center

HOSPITAL MEDICAL CENTER, LTD.



100 E. FOURTH ST. SCOTTSDALE, ARIZONA

Adjoining Scottsdale Baptist Hospital

ANESTHESIOLOGIST
Sue Boyett, M.D.
FAMILY DOCTOR
Jack E. Groh, M.D.
William B. McGahey, M.D.
John A. Martin III, M.D.
Edward A. Wilson, M.D.
GENERAL SURGERY
Boyd H. Metcalf, M.D.
George H. Mertz, M.D.
Jack O. McFarland, M.D.
GENERAL SURGERY – CANCER
Herbert N. Munhall, M.D.
INTERNAL MEDICINE & CARDIOLOGY
John F. Currin, M.D.
OBSTETRICS & GYNECOLOGY
Roy O. Young, M.D.
OPHTHALMOLOGY
Peter S. Sykowski, M.D., F.A.C.S.
Robert L. Yockey, M.D.
eye physician and surgeon
ORAL SURGERY
Ralph G. Peterson, D.D.S.
ORTHODONTIST
James C. Toye, D.D.S.
ORTHOPEDIC SURGERY
Edward E. Conn, M.D.
Malcolm F. Dorfman, M.D.
Willard S. Hunter, M.D.
PATHOLOGY
Thomas B. Jarvis, M.D.
Fred C. Schoene, M.D.
PERIODONTIST
J. Richard Loughry, D.D.S.
PLASTIC SURGERY
Morris Barton, M.D.
THORACIC CARDIOVASCULAR SURGERY
Carl Impellitier, M.D.
UROLOGIC SURGERY
Wilfred M. Potter, M.D.
RADIOLOGY
M. Herbert Nathan, M.D.
DENTISTRY
Lumone E. Willmeng, D.D.S.
OTHERS
Jean Hoffman, Reg. Physical Therapist
Pharmacy
Scottsdale Opticians

For Leasing Information Call
946-9091 or 946-5344

new



a new formulation that relieves pain in tension headache and neuralgia

Dialog is a combination of 15 mg allobarbital and 300 mg acetaminophen. Allobarbital, a proven barbiturate, provides desirable sedation in patients experiencing pain and discomfort. Acetaminophen is a nonsalicylate analgesic-antipyretic, well tolerated and useful in a wide range of mildly painful and febrile conditions.

Dialog is well tolerated, even by those sensitive to aspirin. It is nonirritating to the gastrointestinal tract and, in recommended dosage, has no adverse effects on the kidneys.

- Raises the pain threshold
- Suppresses the pain-producing mechanism
- Reduces emotional tension

2/3449 MK-3



Dialog™

(allobarbital and acetaminophen CIBA)

Indications: For relief of pain and discomfort of simple headache; neuralgia, myalgia, and musculoskeletal pain; dysmenorrhea; bursitis; sinusitis; fibrositis. Also indicated to reduce fever and to relieve discomfort due to respiratory infections, influenza, and other febrile conditions.

Contraindication: Not recommended during pregnancy.

Caution: May be habit-forming. Do not use in patients sensitive to barbiturates or in those with moderate to severe hepatic disease.

Side Effects: Nausea, transitory dizziness, rash. Overdosage of allobarbital produces symptoms typical of acute barbiturate excess.

Dosage: *Adults:* 1 or 2 tablets every 4 hours. Not to exceed 8 tablets in 24 hours. *Children 6 to 12:* ½ to 1 tablet every 4 hours. Not to exceed 4 tablets in 24 hours.

Supplied: *Tablets* (white, scored), each containing 15 mg allobarbital and 300 mg acetaminophen; units of 3 bottles of 30.

For your convenience—prescription-size bottle of 30.

CIBA Pharmaceutical Company, Summit, N.J.

C I B A

co–op.er.a.tion, co.op.er.a.tion, co.op.ēr.a.tion
(kō–op'er–ā'shen), n. 1. a co–operating; joint effort the benefits of which are shared by all members.

UP TO $1,000 MONTHLY BENEFIT
NOW AVAILABLE
ON A STATEWIDE BASIS - MEANS STABILITY

Disability Insurance pays...not only when you're sick or injured...but also in "peace of mind" when you're well!
"The Only Known Substitute for Earning Power"

NATIONAL CASUALTY COMPANY
OF DETROIT, MICHIGAN

Arizona Representatives

PHOENIX ★ CHARLES A. de LEEUW
3424 NORTH CENTRAL AVENUE
(PHONE 266–2403)

TUCSON ★ RONALD E. DEITRICH
SUITE 9, PIMA PLAZA, 2030 E. BROADWAY
(PHONE 623-7941)

Approved and Recommended by the
MEDICAL ECONOMICS COMMITTEE AND THE COUNCIL
...SINCE 1953

HOBBY HORSE RANCH SCHOOL

A School For Exceptional Children

The Hobby Horse Ranch School is both home and school for a small group of children. It welcomes the child who is mentally retarded and physically handicapped as well as the backward child who suffers no physical handicap.

The Hobby Horse Ranch School is a branch of Fairview School in Fishkill, New York which was established in 1936.

Directors: Blanche C. Lightowler, B.A.
Matthew W. Lightowler

P.O.B. 44, Cortaro, Ariz.

PARAMUS COIN EXCHANGE

The East's Largest Coin Exchange

OFFERS U.S. GOLD FOR YOUR FUTURE
ALL BRILLIANT UNCIRCULATED

$20 Gold pieces		**$3 Gold pieces**	
Liberty	$ 54.95		$349.00
St. Gaudens	$ 54.95	**$2.50 Gold pieces**	
$10 Gold pieces		Liberty	$ 52.95
Liberty	$ 32.95	Indian	$ 32.95
Indian	$ 52.95	**$1 Gold pieces**	
$5 Gold pieces		Type 1	$ 49.95
Liberty	$ 23.95	Type 2	$250.00
Indian	$ 32.95	Type 3	$ 75.00

SETS

Liberty Gold Type Set	4 Coins	$159.95
Indian Gold Type Set	4 Coins	$169.95

ALL COINS IN CUSTOM PLASTIC CASES

U. S. SILVER DOLLARS	Single	$2.00
BRILLIANT	Roll	$39.95
UNCIRCULATED	Bag	$1695.00

Gold and Silver is Today's Best Investment

Paramus Coin Exchange **A.N.A. Member**
Bergen Mall Shopping Center
Paramus, N.J. 07652 **201-342,2600**

Gentlemen: Please ship the following:

NAME

ADDRESS

CITY STATE

BILL MY D.C. ACCT. #.....

BILL MY AMER. EXP. ACCT. #.....

For other coin values send for free catalogue!

"son pouvoir antiémétique est élevé"*

Vomiting:
In Geneva they have a word for it

In Geneva, too, Dramamine is a familiar word. Like physicians the world over, they know that "its antiemetic potency* is high" ("son pouvoir antiémétique est élevé").

Nausea and vomiting caused by infection or simple functional gastrointestinal disturbances are quickly controlled by this classic antinauseant.

Usual Adult Dosage: One or two tablets every four hours as needed.

Precautions: Dramamine, notably nontoxic itself, may mask the symptoms of streptomycin toxicity. Patients should be cautioned against operating automobiles or dangerous machinery because of possible drowsiness.

*Neyroud, M.: Praxis 44:648-650 (July 14) 1955.

Research in the Service of Medicine SEARLE

relied on round the world ■

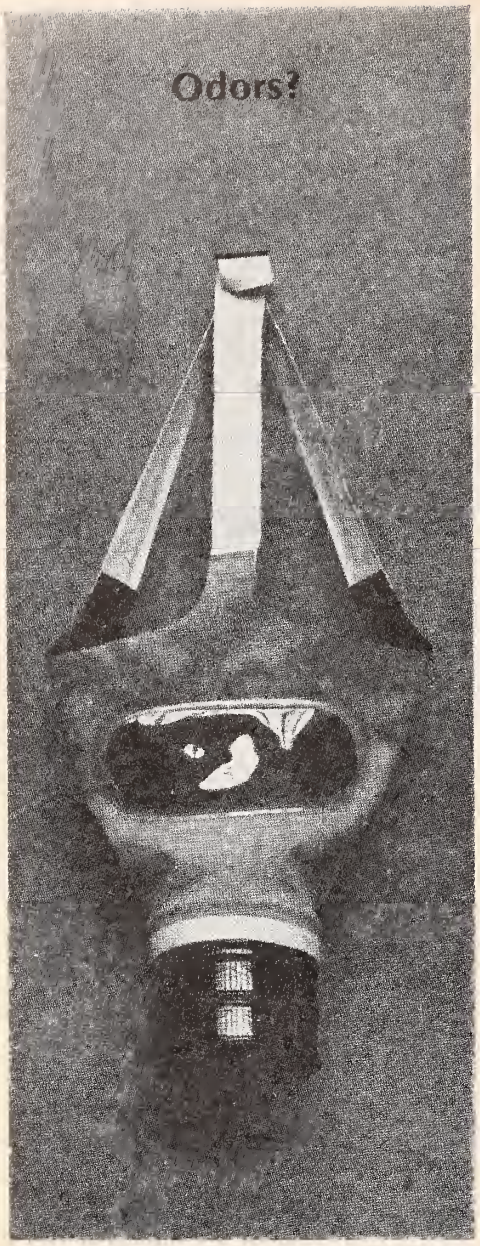
Dramamine®

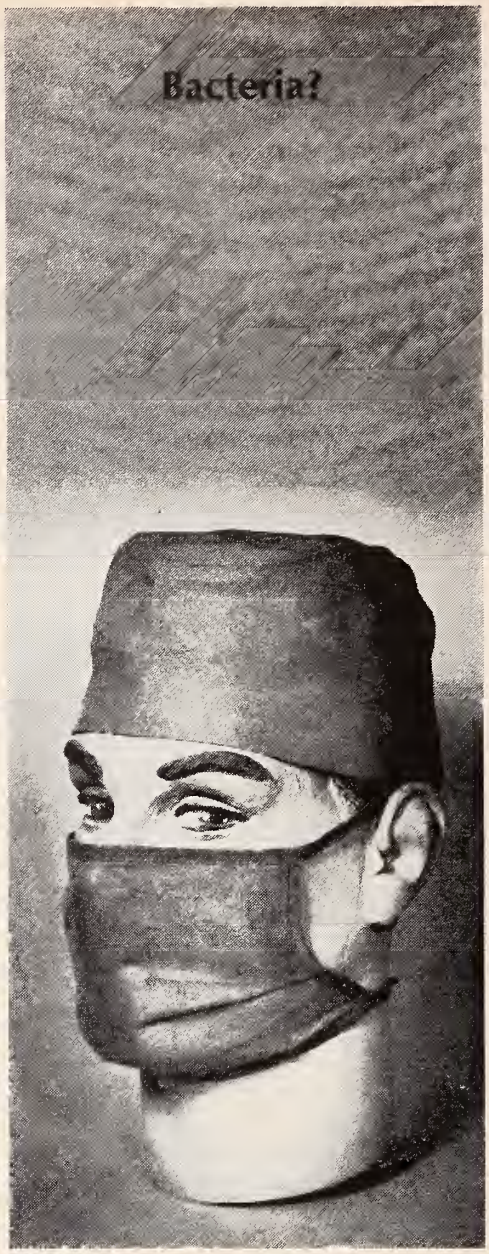
brand of
dimenhydrinate

classic antinauseant

Ampuls (for intramuscular or intravenous use)
Supposicones® / Liquid / Tablets

What's Your Line?





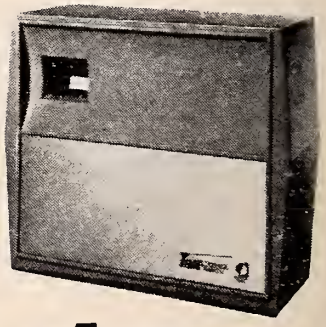


TIME-MIST gives you round-the-clock precision control

Kill odors at the source! Eliminate bacteria to end air-borne danger of infection! Knock flying insects down and out! Only TIME-MIST can do all three jobs—effectively, dependably, consistently—and automatically. TIME-MIST timed automatic aerosol dispenser units and TIME-MIST high-concentration formulations for odor, bacteria and insect control are effective, reliable, attractive and economical. One loading protects an average-sized room for 30 full days right around the clock... measures the right amount of aerosol at the right interval for constant protection. Place TIME-MIST—insert your choice of TIME-MIST aerosol container. Plug it in—and forget it!

TIME-MIST, created by General Time, world's largest precision clock maker, is *right* for you... *right* for your line. Hospitals and Nursing Homes get *assured* protection. Maintenance contractors gain satisfied clients. Write us today for full details on TIME-MIST aerosols and TIME-MIST dispensing units—the line that's matched to your line.

Bacteria, insects, even stubborn odor prob lems of carcinomas, diabetes and gangren "knuckle under" to this attractive unit and it aerosol formulations. They're TIME-MIST created by General Time.



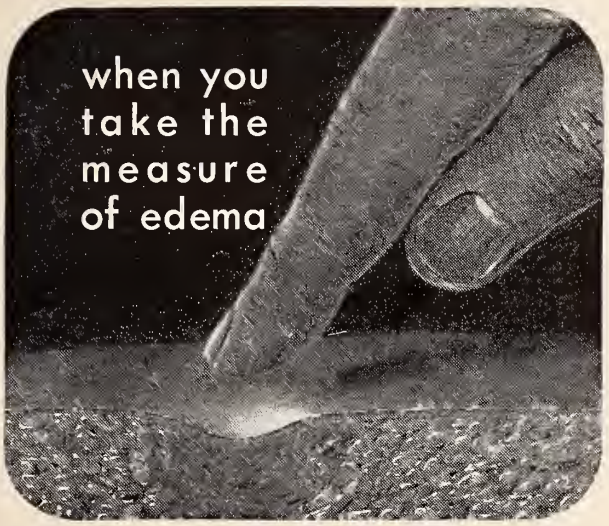
TIME-MIST, INC.
a subsidiary

GENERAL TIME
Progress in the World of Time

Distributed in Arizona by Lily Ice Cream Company

• 345 So. Campbell, Tucson • 624-2468

1111 South Central, Phoenix • 253-2173



. . . introduce your patient to

aquaTAG®

(BENZTHIAZIDE)

AQUATAG (Benzthiazide) is a potent, orally active, nonmercurial, diuretic agent. It is effective orally in producing diuresis in edema states, where it is therapeutically comparable to mercurials given parenterally. AQUATAG (Benzthiazide) is mildly antihypertensive in its own right and enhances the action of other antihypertensive drugs when used in combination.

DIURETIC ACTION: Clinically, the oral administration of AQUATAG (benzthiazide) results in diuretic activity within two hours with maximal natriuretic, chloruretic, and diuretic effects occurring during the fourth, fifth and sixth hours. Maintenance of response continues for approximately 12 to 18 hours. Acidosis is an unlikely complication since therapeutic doses of AQUATAG (benzthiazide) do not appreciably increase bicarbonate excretion. Edematous patients receiving 50 mg. of AQUATAG (benzthiazide) daily for five days developed a maximal increase in the rate of sodium excretion on the first day, and maintained this high rate until depletion of excessive body stores of sodium.

In congestive heart-failure patients, AQUATAG (benzthiazide) produced the same weight loss, during a 48-hour treatment period as did a maximally effective dose of hydrochlorothiazide.

DOSAGE: Diuresis, initially 50 to 200 mg.; maintenance 25 to 150 mg., daily. Hypertension 50 to 100 mg. initially, adjusted to 50 mg. t.i.d. or downward to minimal effective dosage level.

WARNINGS: Use with caution in the presence of renal disease as azotemia may be precipitated or increased. In patients with advanced hepatic disease, electrolyte imbalance may result in hepatic coma. Dosage of coadministered antihypertensive agents should be reduced by at least 50%. In cases of suspected electrolyte imbalance, serum electrolyte determinations should be performed and imbalance, if any, corrected. Stenosis or ulcer of small intestine have been reported with coated potassium formulas, and surgery has been required and deaths have occurred. Based on surveys of both United States and foreign physicians, incidence of these lesions is low and a causal relationship in man has not been definitely established. Until further experience has been obtained, the use of the drug in pregnant patients should be weighed against possible hazards to the fetus.

CONTRAINDICATIONS: AQUATAG (benzthiazide) is contraindicated in progressive renal disease or dysfunction including increasing oliguria and azotemia. Continued administration of this drug is contraindicated in patients who show no response to its diuretic or antihypertensive properties. Severe hepatic disease is a relative contraindication. (See "Warnings" above.)

PRECAUTIONS AND SIDE EFFECTS: Electrolyte imbalance with hypokalemia (digitalis toxicity may be precipitated), hypochloremic alkalosis and hyponatremia may occur.

Patients with cirrhosis should be observed for impending hepatic coma and hypokalemia. Other reactions may include blood dyscrasias, hyperuricemia and gout, nausea, jaundice, anorexia, vomiting, diarrhea, dizziness, paresthesia, photosensitivity and headache. Hepatic fetor, tremor, confusion and drowsiness are signs of impending pre coma and coma in patients with cirrhosis. Insulin requirements may be altered in diabetes. AQUATAG (benzthiazide) should be used with caution post-operatively as hypokalemia is not uncommon. Potassium supplementation may be advisable pre- and post-operatively. There have been occasional reports of thrombocytopenia, leukopenia, agranulocytosis, aplastic anemia and precipitation of acute pancreatitis or jaundice.

Before prescribing or administering, read the package insert or file card available on request.

Available as 25 or 50 mg. scored tablets.

Request clinical samples and literature on your letterhead.

S.J. TUTAG & COMPANY
Detroit, Michigan 48234

DIRECT BILLING UNDER MEDICARE

The doctor using direct billing will NOT need to concern himself with:

a. The eligibility status of the patient and extent of coverage;

b. A distinction between "covered" and "excluded" services;

c. The status of the Part "B" deductible;

d. The application of the $20 Outpatient Diagnostic Service;
Deductible (Part "A") as a credit toward the $50 Part "B" deductible

e. The application of the "three month carry over" provisions from a previous calendar year to the Part B deductible;

f. The 20% coinsurance provisions with the inevitable need for double-billing when assignments are accepted;

g. The technical problem of calculating the 20% coinsurance factor prior to notification of the fee determined by the carrier as "reasonable";

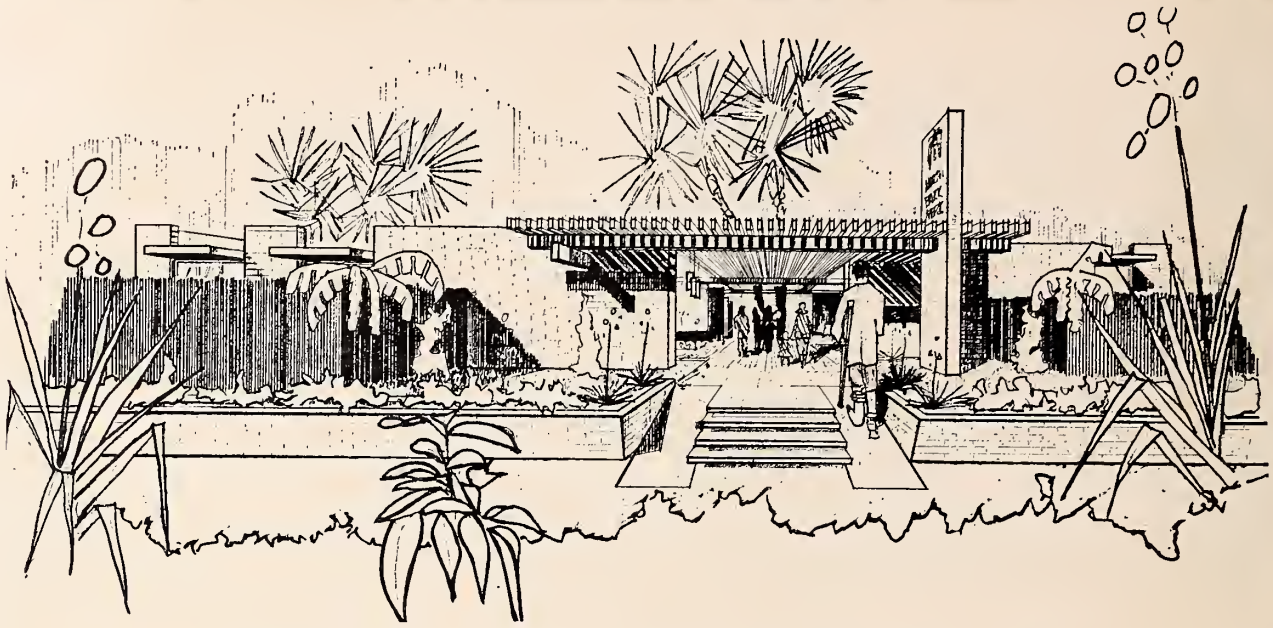
h. The relation of what the physician feels his service is worth as opposed to what the carrier defines as a "reasonable" charge;

i. The presence or absence of supplementary or complementary coverage;

j. Limitations of payment for outpatient services for psychiatric conditions;

k. The use of prescribed forms; and

l. Direct billing does not require the listing of a diagnosis on the receipted bill.



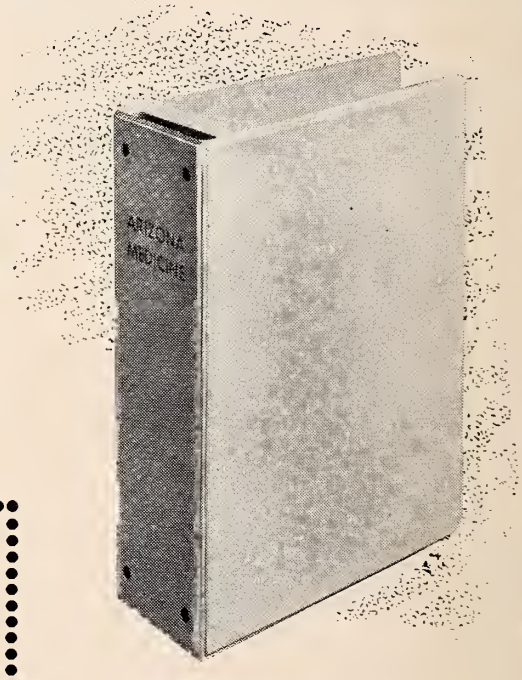
Deluxe Medical Suites Available December 1966

NORTH PARK MEDICAL CENTER

78 West Ray Road
Chandler, Arizona

SHULTS REALTY CO.
969-5509

NOW AVAILABLE



HANDSOME, DURABLE WHITE & GOLD VINYL COVERED BINDERS TO PRESERVE PAST ISSUES OF ARIZONA MEDICINE. EACH BINDER HOLDS UP TO TWELVE ISSUES

Arizona Medicine
p.o. box 128 scottsdale, arizona 85252

PLEASE SEND _____ BINDERS

Name _____

Address _____

I understand that I will be billed for these.

ORDER YOURS TODAY

ONLY

$3.00
EACH



CORRESPONDENCE

May 9, 1966

Charles E. Henderson, M.D.
Secretary — Board of Directors — ArMA

Dear Charlie:

Please thank the Board of Directors for me for the great honor they paid me in presenting the handsome plaque at the President's Banquet during the recent meeting. I was most moved by the gesture, and I am happy only that I did not have to give a speech of response, since you then would have seen the eighth wonder of the modern world, a psychiatrist who was speechless.

I have one or two questions to ask. First of all how does one obtain a copy of the book on early medicine in Arizona? Second, is there any way I can get either a transcript or a tape of the address by Dr. Kenneth McFarland which was given at the President's Banquet?

Cordially,
Lindsay E. Beaton, M.D.
Chairman
A.M.A Council on Mental Health

May 19, 1966

Paul B. Jarrett, M.D.
President — ArMA

Dear Doctor Jarrett:

This will probably be the last note that I will be writing to the Medical Association as the State Health Officer. Realizing this, gives me pangs of regret that I will not have the opportunities to work closely with such a fine professional group as is the Arizona Medical Association.

I must also say that I was deeply touched and honored to receive the perfectly splendid book published by UNESCO. The book in itself has great intrinsic value to both Mrs. Moore and me, but most especially do I value the thoughts expressed and the many signatures appended in the book. This expression, as well as the book, will always remain one of my most prized treasures.

We look forward to returning to Arizona some day, resuming some sort of public service. In the meantime, I will follow with genuine interest, the development of our Association as it enters this new era of practice which was thrust upon us by the 89th Congress. I feel confident that Arizona's physicians will continue their responsible and thoughtful efforts to guide the destinies and directions of the healing arts which will render great service to the people of this wonderful State.

Before closing, may I say a word or two about my successor, Doctor Spendlove? I hope you will get to know him well. He is a man of character, intelligence, and dedication to public service. He is a real "pro" in the public health field. One reason Doctor Spendlove and I joined forces last winter was, I believe, that we shared a common philosophy about the mutual responsibilities that organized medicine and Public Health have. You will find him a delightful person, as well as a man you can count on to support all that is good in medicine.

Again, let me say that the warm personal and professional relationship which developed is, I feel, one of the finest things that can happen to a man in public office. I don't expect a similar relationship to develop in a land half-way around the world where people speak a totally foreign tongue, and in a land whose political climate, at this point, seems to be enigmatic, to say the least.

Sincerely,
William J. Moore, M.D.
Arizona State Department of Health

April 30, 1966

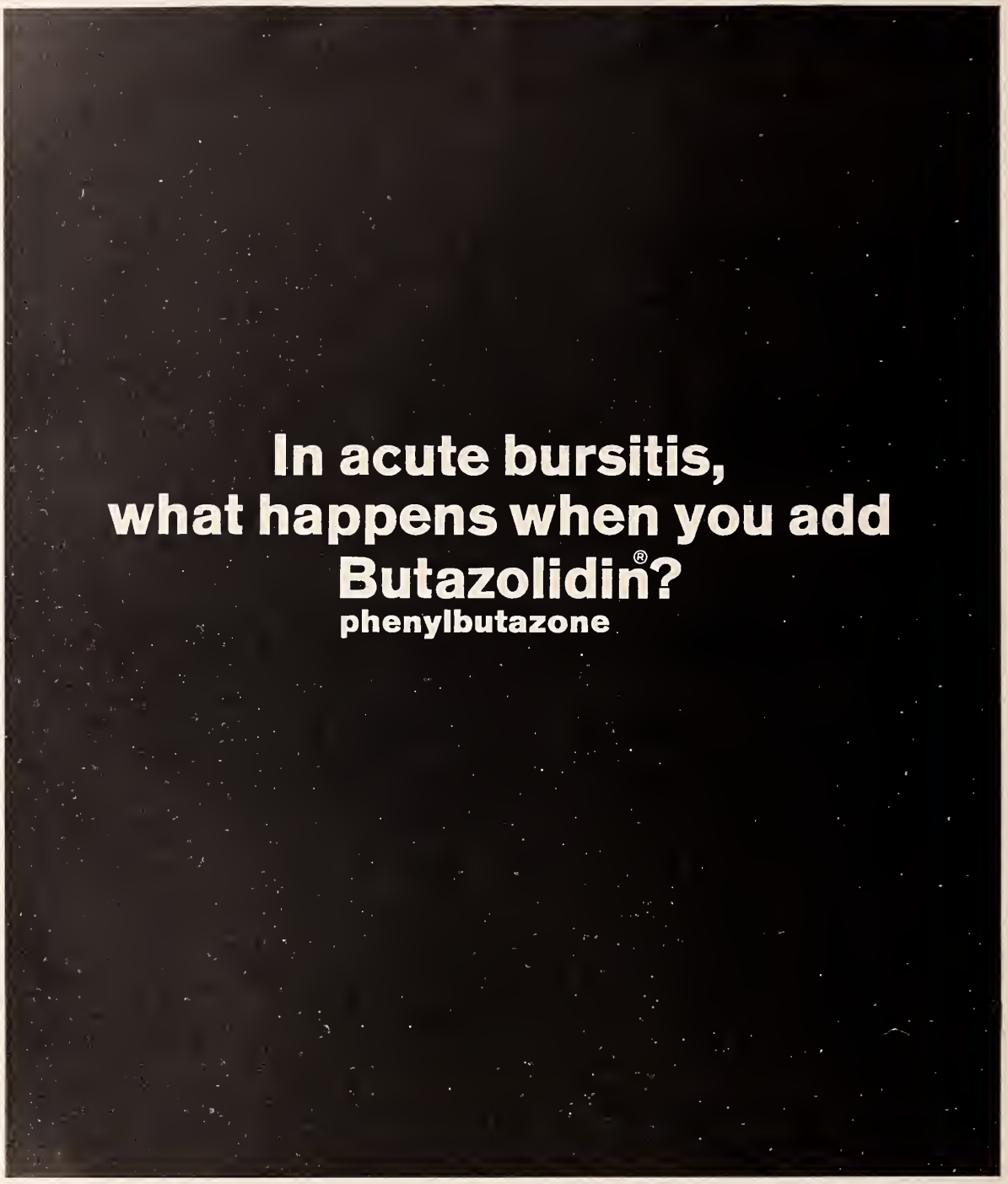
Dr. Paul B. Jarrett, President — ArMA

Dear Dr. Jarrett:

Although it was my privilege to be present in person for the presentation of a check in the amount of $4,699.09 to the University of Arizona School of Medicine, from the American Medical Association Education and Research Foundation, it was not enough to have had an opportunity to thank you in person.

I should like to have the membership of the Association know how deeply grateful those of us responsible for the developing College of Medicine are to the members of our profession within the state who, through their efforts and contributions, have made this gift possible. Particularly, as I tried to indicate when I accepted the check, I feel that this is, once again, an expression of the conviction which professional people have with respect to forwarding into the next generation the opportunities which they themselves have enjoyed. It is in this latter context that the College of Medicine accepts this assistance from the American Medical Association Education and Research Foundation.

Very sincerely yours,
Merlin K. DuVal, Jr., M.D.

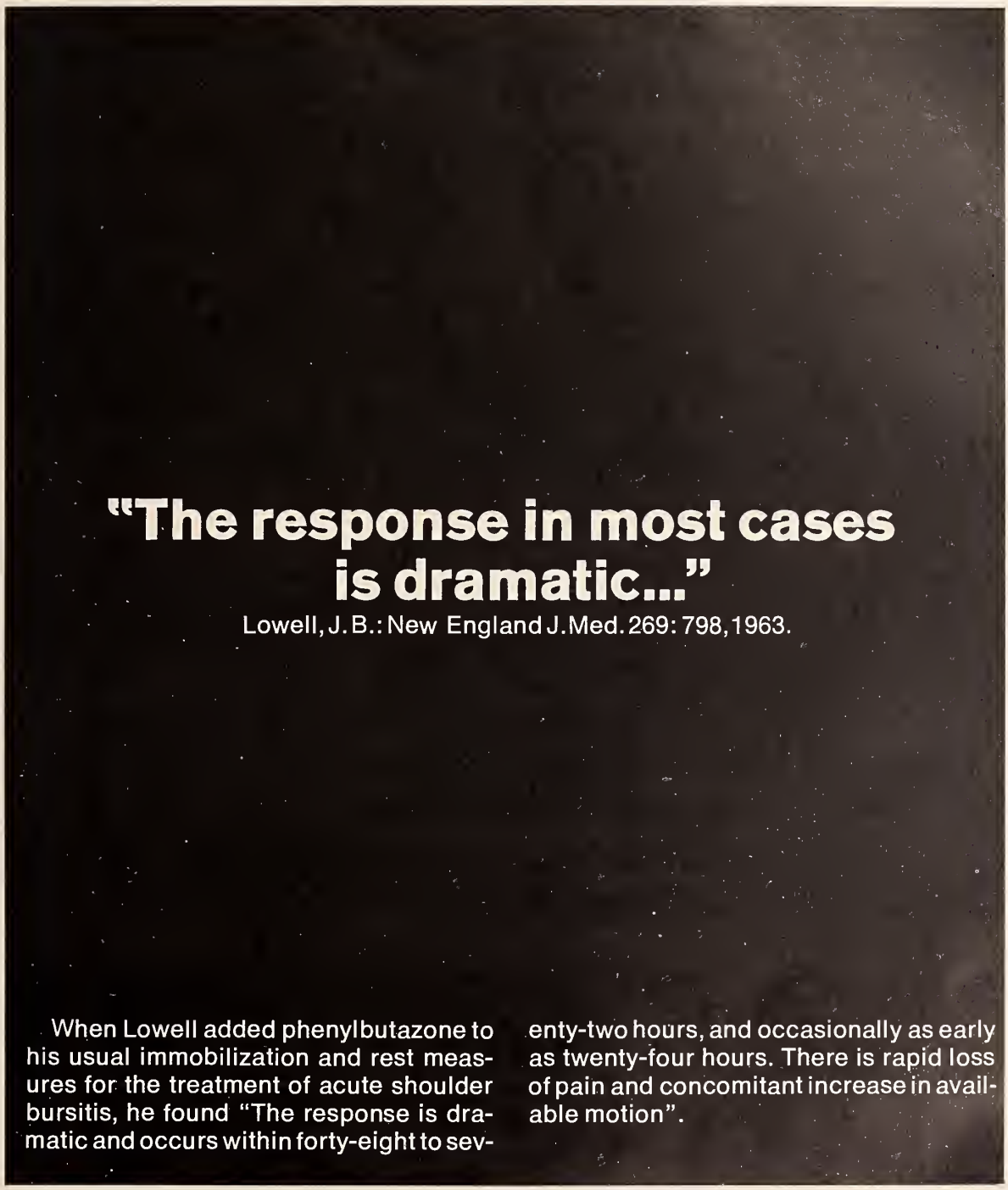


Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. Because of the increased possibility of toxic reactions, the drug should be used with greater care in the elderly and should not be given when the patient is senile or when other potent chemotherapeutic agents are given concurrently. Large doses of Butazolidin alka are contraindicated in patients with glaucoma.

Warning: If coumarin-type anticoagulants are given simultaneously, the physician should watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Patients receiving such concomitant therapy should be carefully observed for this effect. Use with caution in the first trimester of pregnancy.

Precautions: Before prescribing, the physician should obtain a detailed history and perform a complete physical and laboratory examination, including a blood count. The patient should be kept under close supervision and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools. Regular blood counts should be made to guard against blood dyscrasias.

Adverse Reactions: The most common adverse reactions are nausea, edema and drug rash. Moderately lowered red cell count may sometimes occur due to hemodilution. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. Infre-



quently, agranulocytosis, exfoliative dermatitis, Stevens-Johnson syndrome or a generalized allergic reaction may occur and require withdrawal of medication. Stomatitis, salivary gland enlargement, vertigo or languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia are also possible side effects.

Confusional states, hyperglycemia, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hepatitis, jaundice and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently.

Average Dosage: Initially, give 400 mg. daily (one tablet or capsule q.i.d.), reducing this, if possible, when a favorable therapeutic effect has been obtained. If after one week there has been no response, discontinue the drug.

For complete details, please refer to full prescribing information. 6509-V(B)

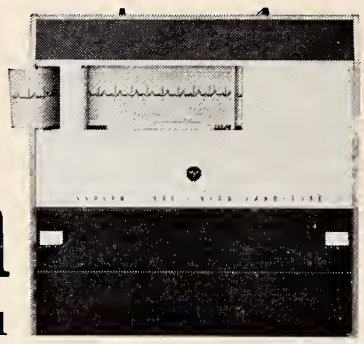
Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York

BU-4513

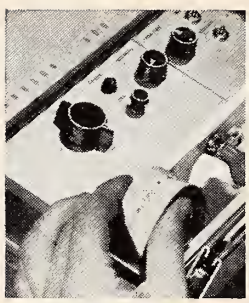
Butazolidin® alka **Geigy**

Each capsule contains: Butazolidin®, phenylbutazone, 100 mg.; dried aluminum hydroxide gel, 100 mg.; magnesium trisilicate, 150 mg.; homatropine methylbromide, 1.25 mg.

if you've ever had to hunt for your ECG cables, straps, electrodes ...pull out the wall plug and reverse it...struggle with paper that wouldn't thread ...or needed a faster chart speed or different sensitivity...



then you should have a 500 Viso to save you time.



All electrodes, straps, Redux Creme and cables store conveniently inside 500 Viso.



Reverse power line polarity on 500 by pushbutton.



Reload Permapaper chart rolls with no threading, in seconds (one roll makes 25 12-lead tests).



All 500 Viso's have 25 and 50 mm/sec. chart speeds . . . ½, 1 or 2X sensitivity settings for optimum trace amplitude.

HEWLETT PACKARD hp *SANBORN DIVISION*

Measuring for Medicine and the Life Sciences

Squaw Peak Sketches

Of Pithy Pioneer Physicians

by dry gulch jake



ITEM

This Arizona practitioner had several firsts. He was the first ophthalmologist to locate and practice in Arizona. He reported cases of "rabbit septicemia," as early as 1907. They were not called tularemia because this term was not coined until 1911, when McCoy worked out the true etiology of the disease in rabbits. Six cases were reported by this doctor at a meeting of the Arizona State Medical Association in Prescott in 1909 in a paper entitled "Infection of the Conjunctiva" and under the heading "Rabbit septicemia." In one of these case reports in *Southwestern Medicine*, where he reviewed it in 1926, the February number, he reports a case: "E. W., age 11, presented himself to me with the following history August 5, 1907, 'ten days ago, first noticed a small pimple on the upper lid of the left eye, accompanied by tearing, pain and swelling of the lips. The following day had four light chills.' He gave a history of having handled jack rabbits. He recorded further that one of his patients he had seen in 1907 had blood drawn June 25, 1925 and this was reported to still have a positive agglutination 'complete in one to ten dilution and partial in the one to twenty dilution," this was reported by Dr. Francis of the United States Public Health Service, the investigator who first established that the disease discovered by McCoy in the ground squirrels and rodents in Tulare County, California, that this indeed was transmissable to humans and that Dr. Ancil Martin had first recognized it. He termed Dr. Martin the "father of tularemia." Dr. Martin was the first to have an x-ray apparatus in the State of Arizona, he bought one in 1898 a few months after the announcement of the discovery by Roentgen, he served as the first President of the Board of Medical Examiners of the State when it was organized. He practiced in Phoenix from 1895 to 1926.

ITEM

This physician was reported to have been the first automobile casualty in Arizona. He was a well known physician of Tucson, Arizona, and was killed by the overturning of his automobile a few miles north of Tucson, on February 27, 1910. It was stated that he was an "expert automobilist" and he was supposed to have been the first to cross the desert from Los Angeles to Arizona in a machine in 1907. He was one of four who started the trip and the only one to finish. This was reported in the Southern California Practitioner, volume XXV, No. 4, April 1910, page 199, and the physician was Dr. Walter B. Purcell.

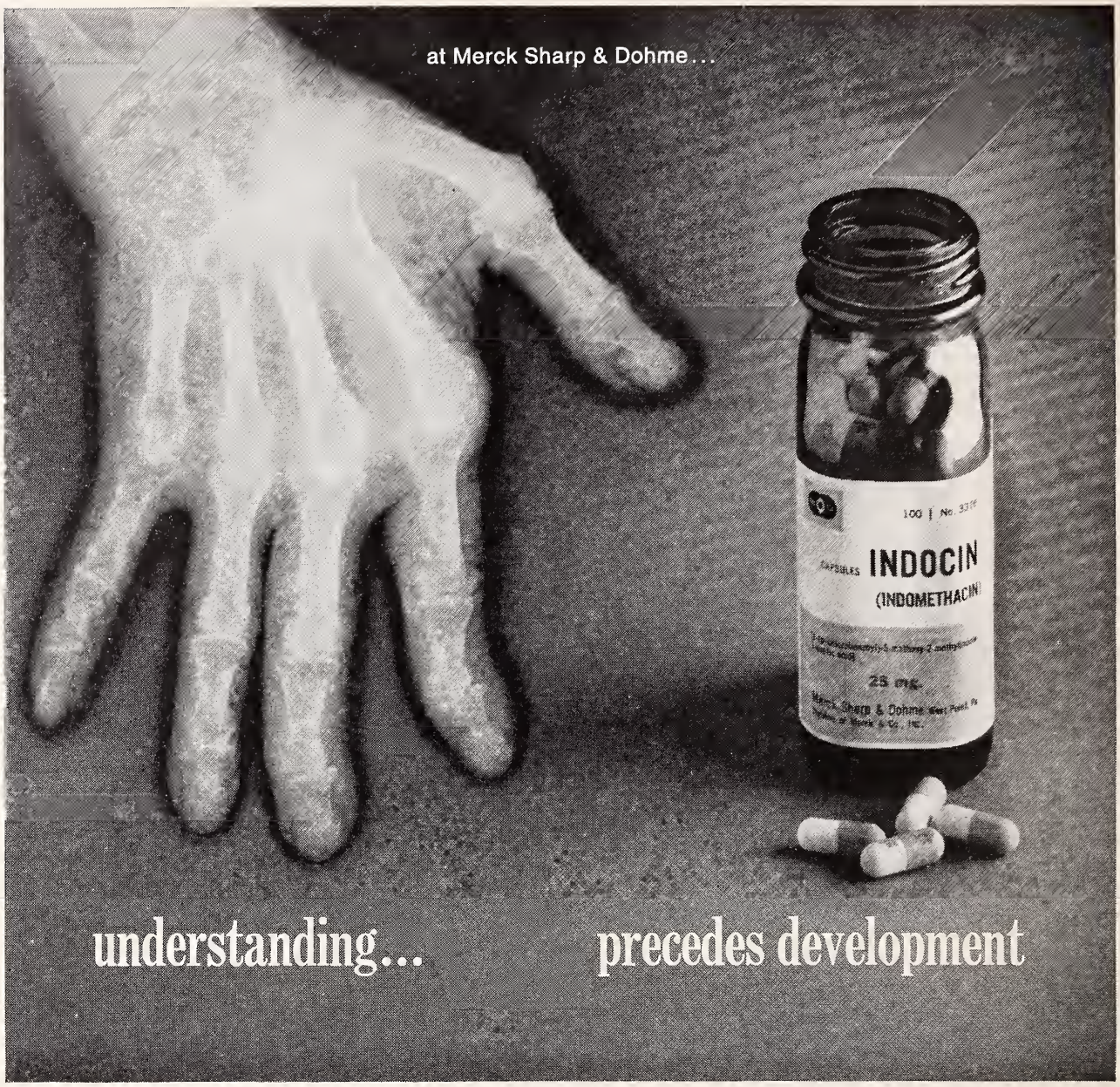
ITEM

This physician, who incidentally never held a license to practice medicine in the State of Arizona, and was very proud of this fact, in a Presidential address to the Arizona Medical Association delivered in Phoenix, April 20, 1910, and reported in the Southern California Practitioner, Volume XXV, No. 5, page 218 to 220, May 1910, had this to say about medical education. The United States had as many medical schools as the rest of the world, 144 compared with 165 in the rest of the world, at that time. A large number of these medical schools conform to very low standards.

He urged all physicians to lend support to the improvement of medical schools and advocated at least one year of college prior to the entrance to the medical school.

This was the redoubtable R. N. Looney, M.D., of Prescott, who contributed so much to early Arizona organized medicine.

John W. Kennedy, M.D.



The synthesis of cortisone was accomplished by Merck Sharp & Dohme in 1948—the famous "Compound E" used by Dr. Philip Hench in his historic experiment at the Mayo Clinic.

But proud as we are of our role in the development of cortisone and subsequent corticosteroids, we have continued to seek a greater understanding of arthritic disorders and new drugs for their treatment.

One such drug—INDOCIN® (indomethacin), a nonsteroid, anti-inflammatory agent fundamentally different in structure and activity from other drugs in use—was recently made available for the treatment of arthritic conditions. It opens new possibilities for the long-term management of arthritis and inflammatory disease.

MERCK SHARP & DOHME | **where today's theory is tomorrow's therapy**
Division of Merck & Co., INC., West Point, Pa.

INDOCIN®

INDOMETHACIN

Indications: Chronic and acute rheumatoid arthritis, rheumatoid (ankylosing) spondylitis, degenerative joint disease (osteoarthritis) of the hip, and gout.
Contraindications: Active peptic ulcer, gastritis, regional enteritis, or ulcerative colitis. Safety in pregnancy has not been established. Not recommended for pediatric age groups.
Warning: Patients who experience dizziness, lightheadedness, or feelings of detachment on INDOCIN should be cautioned against operating motor vehicles, machinery, climbing ladders, etc. Use cautiously in patients with psychiatric disturbances, epilepsy, or parkinsonism.
Precautions and Adverse Reactions: Most commonly, headache, dizziness, lightheadedness, G.I. disturbances. The C.N.S. effects are often transient and frequently disappear with continued treatment or reduced dosage. The severity of these effects may occasionally require cessation of therapy. G.I. effects may be minimized by giving the drug with food or with antacids or immediately after meals. Ulceration of the stomach, duodenum, or small intestine has been reported and, in a few instances, severe bleeding with perforation and death. Gastrointestinal bleeding with no obvious ulcer formation has also been noted; INDOCIN should be discontinued if G.I. bleeding occurs. As a result of G.I. bleeding, some patients may manifest anemia, and for this reason periodic hemoglobin determinations are recommended. Rare reports of effects not definitely known to be attributable to INDOCIN include bleeding from the sigmoid colon (either from a diverticulum or without a known previous pathologic condition), perforation of preexisting sigmoid lesions (diverticulum, carcinoma), and hematuria. In other rare cases, a diagnosis of gastritis has been made while the drug was being given. One patient developed ulcerative colitis, and another, regional ileitis, while receiving INDOCIN; when the drug was given to patients with preexisting ulcerative colitis, there was an increase in abdominal pain. Infrequently observed side effects may include drowsiness, tinnitus, mental confusion, depression and other psychic disturbances, blurred vision, stomatitis, pruritus, edema, and hypersensitivity reactions. Slight BUN elevation, usually transient, has been seen in some patients, although the preponderance of evidence indicates that INDOCIN does not adversely affect renal function, even in patients with preexisting renal disease. Nevertheless, renal function should be checked periodically in patients on long-term therapy. Leukopenia has been seen in a few patients. Transient elevations in alkaline phosphatase, cephalin-cholesterol flocculation, and thymol turbidity tests have been observed in some patients and, rarely, elevations of SGOT values; the relationship of these changes to the drug, if any, has not been established. As with any new drug, patients should be followed carefully to detect unusual manifestations of drug sensitivity.
Before prescribing or administering, read product circular with package or available on request.



SELF-DIAGNOSIS

Nearly all your waking hours are given to the cause of medicine. But there never seems to be time to think about your *own* problems, or future plans for your family.

We urge you to join with our many other friends and customers of the medical profession, and arrange for a visit — with your lawyer — to our Trust Department.

Discuss your estate plans as thoroughly as you wish. Let an experienced Trust Officer show you how the group-judgment of specialists in the Trust field will insure your estate being handled soundly, economically — and to the letter of your Will.

VALLEY NATIONAL BANK TRUST DEPARTMENT

MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

The only thing better than Blue Cross/Blue Shield is good health.

BOARD OF MEDICAL EXAMINERS

The Board of Medical Examiners of the State of Arizona at a regular meeting held Saturday, July 9, 1966, issued licenses to practice medicine in the State of Arizona to the following doctors of medicine:

4540 ANDERSEN, Robert L. (D), Mayo Clinic, Rochester, Minnesota.

4541 *ANDERSON, Leo E. (ADM), Maricopa Co. Gen. Hosp., Phoenix, Arizona.

4542 ASHFORD, Rowell S. (OBG), Maricopa Co. Gen. Hosp., Phoenix, Arizona.

4543 BARLOW, Ronald S. (U), Univ. of Okla. Med. Ctr., Okla. City, Okla.

4544 BARNES, Ronald E. (GS), Maricopa Co. Gen. Hosp., Phoenix, Arizona.

4545 BENNETT, Jack L. (GP), 618 Central Avenue, Safford, Arizona.

4546 BONNETT, JR., Charles A. (ORS), c/o Rancho Los Amigos Hosp., Downey, Calif.

4547 BRUCER, Marshall H. (R), 1641 N. Tucson Blvd., Tucson, Arizona.

4548 BYBEE, Paul R. (P), 444 West Osborn Rd., Phoenix, Arizona.

4549 CANNON, George L. (IM-C), Maricopa Co. Gen. Hosp., Phoenix, Arizona.

4550 CARRELL, JR., William D. (IM), V.A. Hospital, Long Beach, California.

4551 CHALEF, Rita M. (CHP), 212 Robby Lane, Manhasset Hills, New York.

4552 CHARLES, John B. (GS), 1313 North 2nd Street, Phoenix, Arizona.

4553 CHLOUPEK, William N. (GP), 2021 North 24th Street, Phoenix, Arizona.

4554 CHRISTMAN, Eldon W. (GP), 97 N. Arizona Place, Chandler, Arizona.

4555 *COBB, Lucy M. (P), Arizona State Hosp., Phoenix, Arizona.

4556 COLE, Ronald W. (GP), Grand Canyon Hosp., Grand Canyon, Arizona. (Deceased 8/6/66)

4557 CONLEY, Edward J. (PD), St. Joseph's Hosp., Phoenix, Arizona.

4558 CORNELL, William P. (GS-TS), 926 E. McDowell Road, Phoenix, Arizona.

4559 DANIELSON, Harry A. (NS), 2021 North Central Avenue, Phoenix, Arizona.

4560 *ENGLEHART, Charles E. (P), Arizona State Hosp., Phoenix, Arizona.

4561 FATHEREE, Jack D. (PH), Ariz. Dept. of Health, Phoenix, Arizona.

4562 GODERSKY, Robert G. (PH), Ariz. State Dept. of Health, Phoenix, Arizona.

4563* GORDON, Arthur A. (P), Arizona State Hosp., Phoenix, Arizona.

4564 HEALY, John P. (OPH), 425 W. 5th Place, Mesa, Arizona.

4565 HILDEBRAND, John E. (GS), 802 W. Anderson Rd., Flagstaff, Arizona.

4566 HILDEBRAND, Rebecca A. B. (GP), 802 W. Anderson Rd., Flagstaff, Arizona.

4567 IVORY, Peter B. C. B. (P), N.E. Florida State Hosp., Macclenny, Florida.

4568 JARVIS, John H. (P), Arizona State Hosp., Phoenix, Arizona.

4569 KEGGI, Kristaps J. (ORS), Yale Univ. Sch. of Med., New Haven, Conn.

4570 KEMPER, JR., Walter O. (GP), Miami Inspiration Clinic, Miami, Arizona.

4571 LANGSTON, Don V. (PD), 1313 North 2nd Street, Phoenix, Arizona.

4572 LEMON, Frank R. (GPM-IM-PH), 321 W. Washington, Santa Ana, Calif.

4573 LeSENEY, Catherine C. (PH), 204 E. Third St., Casa Grande, Arizona.

4574 LETOURNEAUX, Stephen (GP), 711 Morley Avenue, Nogales, Arizona.

4575 LEVINE, Bernard E. (PUD), 909 East Brill Street, Phoenix, Arizona.

4576 LIND, Max (OBG), St. Joseph's Hosp., Phoenix, Arizona.

4577 LINDNER, JR., Walter E. (GP), 4909 North 44th St., Phoenix, Arizona.

4578 L'INSALATA, Rudolph P. (GP), 2524 West Elm Ave., Phoenix, Arizona.

4579 LIPPARD, Walter K. (OBG), St. Joseph's Hosp., Phoenix, Arizona.

4580 LLOYD, Robert C. (OBG) (8/1/66), 1720 W. Wetmore Road, Tucson, Arizona.

4581 McQUARRIE, Howard G. (OBG), 508 East So. Temple, Salt Lake City, Utah.

4582 MAAS, Louis P. (ANES), UCLA Med. Ctr., Los Angeles, California.

4583 MATHESON, Thomas E. (GP), Miami Inspiration Clinic, Miami, Arizona.

4584 MILANI, Robert (NS), 1822 Bridge St., No. 5, Los Angeles, California.

4585 *NUSS, Robert H. (P), Arizona State Hosp., Phoenix, Arizona.

4586 OLIN, Lester G. (OBG), 423 - 8th Street, Yuma, Arizona.

4587 PENNERS, Johannes H. H. (R) (10/1/66), 5th and Alvernon Streets, Tucson, Arizona.

4588 *PERRIN, William D. (GP), Univ. of Arizona, Tucson, Arizona.

4589 PLAINER, Truman D. (OPH), 5091 Galway Circle, Huntington Bch., California.

4590 REILLY, Robert J. (U), 2222 North Craycroft Rd., Tucson, Arizona.

4591 RICHARDSON, Darwin L. (GP), 834 Front Street, Needles, California.

4592 RICHEY, Donald F. (GP), Rt. 1, Box 12, Parker, Arizona.

4593 ROBINS, Eldon L. (GP), 9356 West Van Buren St., Tolleson, Arizona.

4594 ROMERO, Rosamond C. (A), 909 East Brill Street, Phoenix, Arizona.

4595 SANDHOFF, Robert K. (IM-GE), 392 Redondo Ave., Long Beach, California.

4596 SCHADE, III, George H. (OBG), Good Samaritan Hospital, Phoenix, Arizona.

4597 SCHRANTZ, Robert D. (PATH), St. Joseph's Hosp., Phoenix, Arizona.

4598 SCHUMACHER, James A. (GP), USPHS Hosp., 1550 E. Indian Sch. Rd., Phoenix, Arizona.

4599 SCOTT, Richard H. (OBG), Maricopa Co. Gen. Hosp., Phoenix, Arizona.

4600 SHANKEL, Willard (P), 1601 N. Tucson Blvd., No. 21, Tucson, Arizona.

4601 SHERMAN, Howard (IM-GE), 444 West Osborn Road, Phoenix, Arizona.

4602 SCHRADER, JR., Carl E. (GP), R.R. No. 3, Warsaw, Indiana.

4603 SMITH, Darrell D. (IM), St. Luke's Hospital, Phoenix, Arizona.

4604 *SPENDLOVE, George A. (GPM), Ariz. State Dept. of Health, Phoenix, Arizona.

4605* STICKLER, Joseph H. (PH), Cochise Co. Health Dept., Bisbee, Arizona.

4606 STREIB, Glenn R. (ANES), 7117 Dellwood Rd., N.E., Albuquerque, New Mexico.

4607 THOMAS, III, Morton S. (GP), Island Park, Hamilton, Indiana.

4608 WALKER, Glen L. (GP), 291 W. Wilson Ave., Coolidge, Ariz.

4609 WALSTON, James H. (GP), 1915 Dakota Ave., So. Sioux City, Nebraska.

4610 WILLIAMS, Robert W. (NS), Un. of Ill. Coll. of Med., Chicago, Illinois.

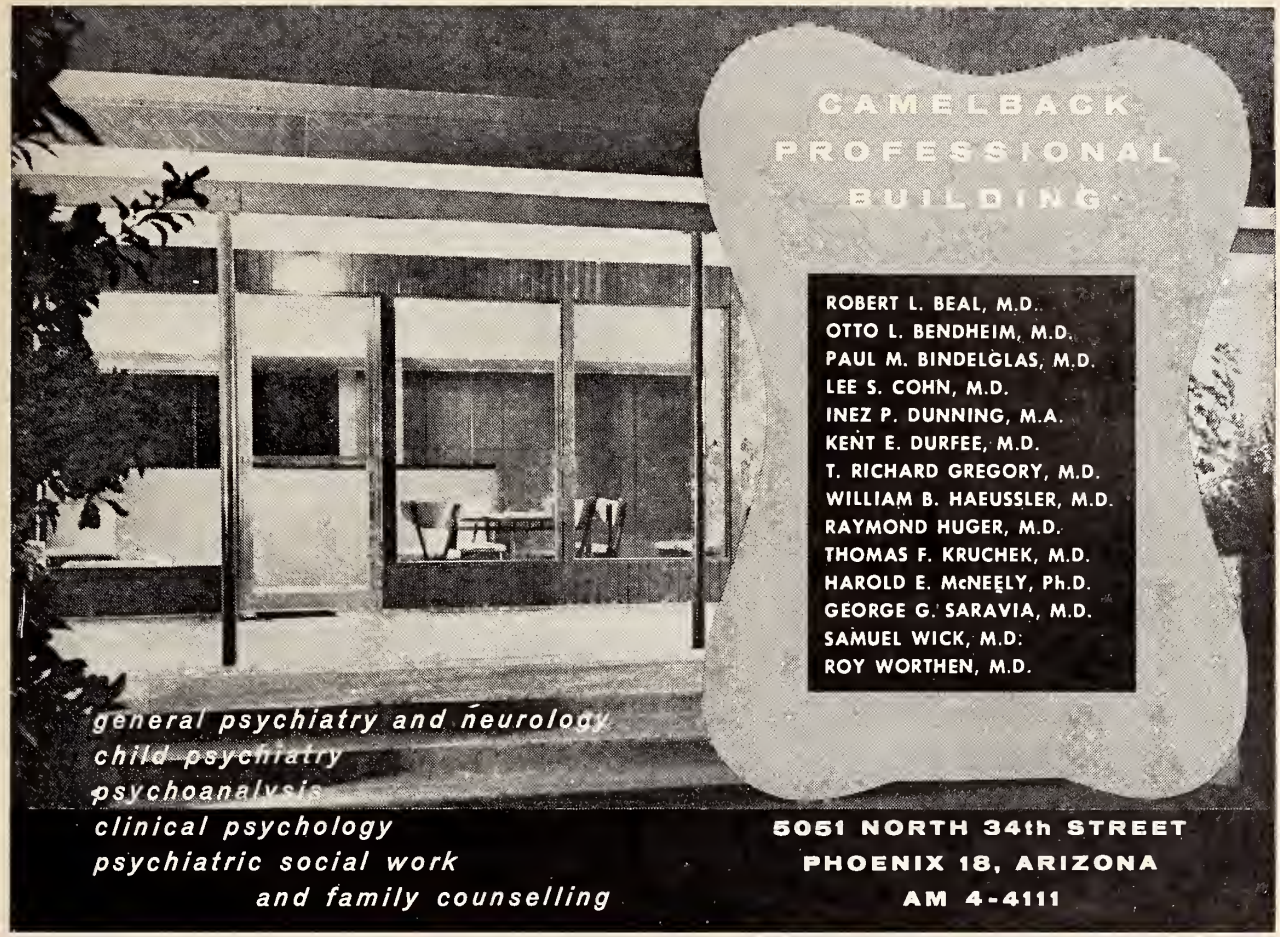
4611 WILLIS, JR., Harper F. (P), Arizona State Hosp., Phoenix, Arizona.

4612 YUDELL, Alan (N), 162 Plantation Road, Houston, Texas.

* Limited Licenses issued pursuant to the exemptions provided in Arizona Revised Statutes, as amended in 1965.

The Board further authorized issuance of Temporary Licenses to the following doctors of medicine:

	Issued	Expires
Coffman, James H. (GP), Ganado	3/21/66	9/21/66
McLouth, Sydney L. (GP), Ganado	3/21/66	9/21/66
Ott Elvira (P), Arizona State Hospital	4/21/66	10/21/66
Witchen, Jack M. (ANES), Mesa-Tempe-Chandler	4/25/66	10/25/66
Gedge, Stafford W. (IM), Ganado	6/ 1/66	12/ 1/66
Hess, Dennis C. (GP), Safford	6/ 7/66	12/ 7/66
Constant, Richard R. (GP), Casa Grande	7/ 1/66	1/ 1/67
Dilley, Colleen W. (PD), Pima Co. Gen. Hosp.	7/ 6/66	1/ 6/67
Jaffe, Morton A. (R)	7/ 9/66	1/ 9/67
Nordmo, Stanley H. (PATH), Maricopa Co. Hosp.	7/14/66	1/14/67
Henry, Thomas S. (IM), Flagstaff	7/14/66	1/14/67
White, Jr., Joseph C. (N), Barrow Neur. Inst.	7/21/66	1/21/67
Ring, Floyd O. (P), So. Ariz. Ment. Hlth. Ctr.	7/26/66	1/26/67
Dorn, Russell (GP), Univ. of Ariz. SHC	7/28/66	1/28/67
Garver, Paddy R. (GP), Show Low	7/28/66	1/28/67
Kunkel, Donald B. (GP), Willcox	7/28/66	1/28/67
Benchimol, Alberto (CD), Good Samaritan Hosp.	7/28/66	1/28/67
Hilding, Ronald F. (GP), Ariz. State Hosp.	8/ 1/66	2/ 1/67
Sabin, Jr., George M. (ANES), Maricopa Co. Hosp.	8/ 1/66	2/ 1/67



ROBERT L. BEAL, M.D.
OTTO L. BENDHEIM, M.D.
PAUL M. BINDELGLAS, M.D.
LEE S. COHN, M.D.
INEZ P. DUNNING, M.A.
KENT E. DURFEE, M.D.
T. RICHARD GREGORY, M.D.
WILLIAM B. HAEUSSLER, M.D.
RAYMOND HUGER, M.D.
THOMAS F. KRUCHEK, M.D.
HAROLD E. McNEELY, Ph.D.
GEORGE G. SARAVIA, M.D.
SAMUEL WICK, M.D.
ROY WORTHEN, M.D.

general psychiatry and neurology
child psychiatry
psychoanalysis
clinical psychology
psychiatric social work
and family counselling

5051 NORTH 34th STREET
PHOENIX 18, ARIZONA
AM 4-4111

THE DIAGNOSTIC LABORATORY

Complete Medical Laboratory Service, X-Ray Diagnosis
Radiation Therapy, Radioactive Isotopes



PATHOLOGISTS
Maurice Rosenthal, M.D.
George Scharf, M.D.
Seymour B. Silverman, M.D.
Bland Giddings, M.D.
Sidney H. Zuber, M.D.

RADIOLOGISTS
1130 E. McDowell Office — 258-1601
Marcy L. Sussman, M.D.
1901 E. Thomas Road Office — 274-3603
Edward L. Batts, M.D.
William S. Stone, M.D.
George A. Gentner, M.D.

Diplomates of the American Boards of PATHOLOGY and RADIOLOGY

1901 East Thomas Road • Phoenix, Arizona • Phone 264-2101



following infection

B and C vitamins are therapy: STRESSCAPS B and C vitamins in therapeutic amounts... help the body mobilize defenses during convalescence... aid response to primary therapy. The patient with a severe infection, and many others undergoing physiologic stress, may benefit from STRESSCAPS capsules.



Stresscaps®

Stress Formula Vitamins Lederle

FOR PROFESSIONAL RECOMMENDATION ONLY

Each capsule contains:

Vitamin B_1 (as Thiamine Mononitrate)	10 mg
Vitamin B_2 (Riboflavin)	10 mg
Vitamin B_6 (Pyridoxine HCl)	2 mg
Vitamin B_{12} Crystalline	4 mcgm
Vitamin C (Ascorbic Acid)	300 mg
Niacinamide	100 mg
Calcium Pantothenate	20 mg

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York

Lederle

626-6—3612

THE ELEVENTH ANNUAL REUNION OF THE MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO

The 11th Annual Reunion of the Medical Society of the United States and Mexico will take place on October 5, 6, and 7, 1966 at the Pioneer International Hotel, Tucson, Arizona. Plans for the meeting are well underway, and a large turnout of members and guests from both sides of the border is anticipated.

The scientific program will feature a wide variety of papers by Mexican and American physicians. Guest speakers include Dr. Dan Gordon, Department of Ophthalmology, New York Hospital, Cornell University Medical College; Drs. Bernard M. Norcross and Salvatore La Tona, Department of Medicine, University of Buffalo School of Medicine; Dr. Arthur Bernstein, Newark Beth Israel Hospital, Newark, New Jersey; and Dr. John Sigler, Detroit, Michigan. There will be panel discussion on The Aching Back, Recent Advances in Diagnosis and Treatment of Vascular Diseases, and Endocrine Problems and Fertility.

The system of simultaneous translation which has proved so successful at previous meetings will again be utilized.

Registration for the meeting will begin at 6:00 p.m., October 4, 1966, at the Pioneer Hotel. This will be followed by an introductory cocktail party. The social highlight of the meeting will be the dinner dance at the Skyline Country Club on October 6 with music by the Tucson doctors' band. A barbecue at the Saddle and Surrey Guest Ranch has also been planned, and there will be luncheons with entertainment at the Old Pueblo Club and the Pioneer Hotel. Entertainment will be provided by international students from the University of Arizona.

As usual, the women's committee is hard at work on planning special events for the wives of members and guests.

MEDICINE IN TERRITORIAL ARIZONA

by

Frances E. Quebbeman

LIMITED NUMBER OF AUTOGRAPHED COPIES NOW AVAILABLE

$7.50 each

Arizona Medical Association
4601 N. Scottsdale Road — Suite 201
Scottsdale, Arizona



A full complement of
highly trained registered nurses
helps make the patient's stay at Camelback Hospital
an infinitely more pleasant one.
A normal ratio of more than
one registered staff nurse for every two patients
assures maximum attention and consideration
at all times. Constant care and supervision
of patients is provided around the clock
by the entire hospital staff.

Camelback Hospit

5055 North 34th St
AMherst 4-4
PHOENIX, ARIZ
ARIZONA FOUNDATION FOR NEUROLOGY AND PSYCHI
A Non-Profit Corpo

Located in the heart of the beautiful Phoenix citrus area near picturesque Camelback Mountain, the hospital is dedicated exclusively to the treatment of psychiatric and psychosomatic disorders, including alcoholism.

APPROVED BY THE JOINT COMMISSION ON ACCREDITATION OF HOSPITALS; and THE AMERICAN PSYCHIATRIC ASSOCIA

When the problem is only skin deep

USE 'POLYSPORIN'® brand POLYMYXIN B-BACITRACIN OINTMENT

for topical antibiotic therapy with minimum risk of sensitization

Caution: As with other antibiotic products, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

Supplied in ½ oz. and 1 oz. tubes.

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, N.Y.



Medical Center X-Ray and Clinical Laboratory

1313 North 2nd Street
Phoenix, Arizona
Phone ALpine 8-3484

DIAGNOSTIC X-RAY

CLINICAL PATHOLOGY TISSUE PATHOLOGY

ELECTROCARDIOGRAPHY BASAL METABOLISM

R. Lee Foster, M.D., F.A.C.R., F.A.C.P., Director *Martin L. List, M.D., Radiologist*

Diplomates of American Board of Radiology

Lorel A. Stapley, M.D., Consultant Pathologist

Physicians' Directory

ArMA

DIRECTORY AND CLASSIFIED RATES

- *Professional card and classified space is available at $3.50 for the first fifty words or less; 5c for each additional word thereafter.*

- *Mail copy to Business Manager, ARIZona MEDICINE, Post Office Box 128, Scottsdale, Arizona 85252, not later than the tenth of the month preceding publication.*

ALLERGY

JOHN F. McKENNA, M.D.
Associate Fellow, American College of Allergists

PARK CENTRAL NORTH
Medical Building
555 West Catalina
Phoenix, Arizona 85013
Phone 264-1381

DANIEL H. GOODMAN, M.D., F.A.C.P.
Diplomate

American Board of Internal Medicine
and Subspecialty Board of Allegry

31 W. Camelback Road
Phoenix
277-3337

500 W. 10th Place
Mesa
969-3966

HOWARD M. PURCELL, JR., M.D.

JAMES A. SMIDT, M.D.

ALLERGY OF CHILDREN

American Board of Pediatrics
American College of Allergists

322 W. McDowell Rd. PHOENIX, ARIZONA
AL 2-9731

ROBERT HEALY STEVENS, M.D.

Fellow American College Chest Physicians
Allergy and Internal Medicine

The Medical Center
1313 N. 2nd Street
Phoenix 4, Arizona

DERMATOLOGY

GEORGE K. ROGERS, M.D.

DERMATOLOGY

Diplomate of American Board of
Dermatology and Syphilology

Phone ALpine 3-5264
105 W. McDowell Road Phoenix, Arizona

ONCOLOGY

JAMES M. OVENS, M.D.
F.A.C.S. F.I.C.S.

Diplomate American Board of Surgery
Cancer and Tumor Surgery
X-ray and Radium Therapy

333 W. Thomas Road Phone 279-7301
Phoenix 13, Arizona

ORTHOPEDIC SURGERY

THE ORTHOPEDIC CLINIC
ORTHOPEDIC SURGERY

W. A. Bishop, Jr., M.D., F.A.C.S.* — A. L. Swenson, M.D. F.A.C.S.* — Ray Fife, M.D., F.A.C.S.* — Sidney L. Stovall, M.D. F.A.C.S.* — Thomas H. Taber, Jr., M.D., F.A.C.S.*

Robert A. Johnson, M.D.* — Paul E. Palmer, M.D.*

*Diplomates of the American Board of Orthopedic Surgery

2620 N. 3rd Street — Phoenix, Arizona — CR 7-6211

Physicians' Directory

PATHOLOGY

LOUIS HIRSCH, M.D.
RALPH H. FULLER, M.D.
WILLIAM M. HINDMAN, M.D.
EDWARD A. BRUCKER, M.D.
ARTHUR D. SILVER, M.D.

Diplomates American Board of Pathology
Clinical Pathology — Pathologic Anatomy

1601 N. Tucson Blvd.
Tucson, Arizona

PSYCHIATRY

LEO RUBINOW, M.D.
PSYCHIATRY
AM 6-0630

224 E. Thomas Rd. Phoenix, Arizona

RADIOLOGY

R. LEE FOSTER, M.D., F.A.C.R., F.A.C.P.
MARTIN L. LIST, M.D., Radiologist

Diplomates of American Board of Radiology
Diagnostic Roentgenology

1313 N. Second St.
Phone ALpine 8-3484
Phoenix, Arizona

MARCY L. SUSSMAN, M.D., F.A.C.R.
Diplomate of American Board of Radiology

DIAGNOSTIC RADIOLOGY
THERAPEUTIC RADIOLOGY
RADIOISOTOPES

1130 E. McDowell Rd.
Phoenix, Arizona
ALpine 8-1601

540 Wells Fargo
Scottsdale, Arizona
WHitney 5-3959

This Space
Available for
Professional Card
Listing

Pharmacy Directory

Fairmont Pharmacy

3231 East McDowell Road Phoenix, Arizona

PRESCRIPTIONS — DRUGS — COSMETICS — FOUNTAIN

BRidge 5-5719 FREE DELIVERY

In Scottsdale call
Lute's Scottsdale Pharmacy
For
PRESCRIPTIONS
WH 5-8420 — WH 5-8429
Next to the 1st National Bank

This Space
Available



Pharmacy Directory

Serving Arizona
Health Needs
Since 1908

Ryan-Evans
DRUG STORES

Phoenix - Tucson - Scottsdale - Mesa - Tempe
Maryvale - Glendale - Westown - Sunnyslope
Paradise Hills - Carefree - Apache Junction
Globe - Miami - Casa Grande - Wickenburg

Classified

DOCTOR'S CENTRAL DIRECTORY

Helen M. Barrasso, R. N., Director
For Emergencies or in Absence of Your Doctor

CALL EA 7-7471

At Your Service 24 Hours Daily

2807 East Speedway Tucson, Arizona

"Established 1932"

DANNY T. SEIVERT INSURANCE

Malpractice & Non-Cancelable Disability with Guaranteed Rates

Professional Programs for Professional Men

Del Webb's TowneHouse — Suite 1700
100 W. Clarendon — Phoenix
Telephone 277-1487

Classified

Private practice available for Board certified or Board eligible Internist at Cottonwood, Arizona. New hospital facilities available, plus office space. Estimated income of approximately $30,000 for first year. Any other necessary information please contact Roland W. Wilpitz, Administrator, Marcus J. Lawrence Memorial Hospital, P. O. Box 548, Cottonwood, Arizona 86326.

ATTENTION: Immediate opening for physician interested in Group General Practice in Arizona. New clinic and hospital facilities. No investment or equipment necessary. Industrial connection allows immediate salary. Will accept draft eligible physician. Reply: Drawer M, Miami, Arizona.

Situation Wanted: Board Certified General Surgeon desires to re-locate in Arizona; licensed in Arizona; married with family; no objection to limited GP; available for personal interview for mutual evaluation. Reply: Box 64-3, 4601 N. Scottsdale Road, Suite 201, Scottsdale, Arizona 85251.

EENT Physician and Surgeon desires to semi-retire and relocate. Would consider association, solo practice or Student Health position as General Practitioner. Licensed in Arizona. Reply: Box 64-10, 4601 N. Scottsdale Road, Suite 201, Scottsdale, Arizona 85251.

STAFF PHYSICIANS for Tuberculosis Sanatorium, Tempe. Background in internal medicine, chest disease or thoracic surgery helpful. $15,000-up range. Must have minimum of either two years experience in tuberculosis hospital or five years in general practice. Address inquiries to Arizona Merit System, 420 North 15th Avenue, Phoenix, Arizona.

Arizona Medicine

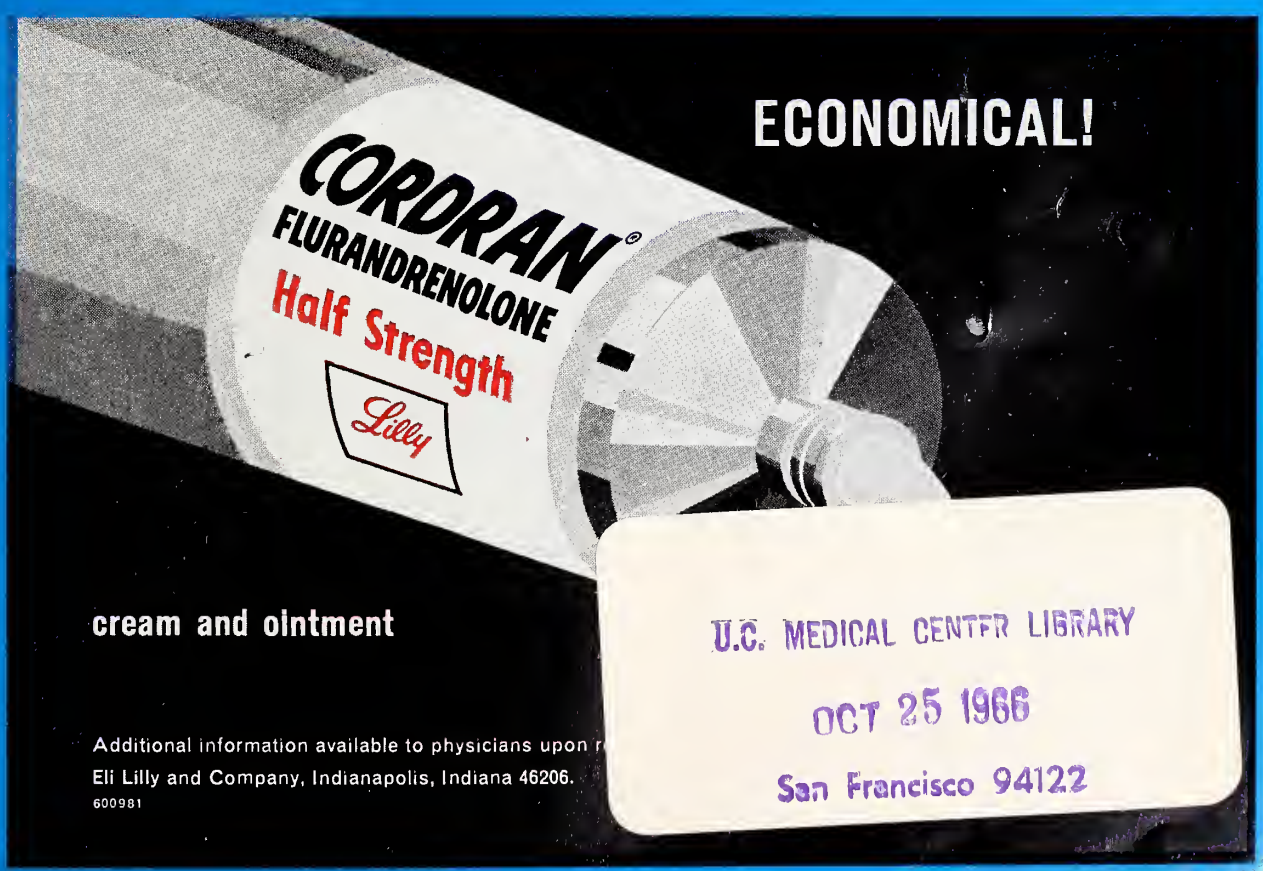
JOURNAL OF ARIZONA MEDICAL ASSOCIATION
MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO

OCTOBER 1966
VOL. 23, NO. 10

FEATURES:

PITFALLS OF THYROID FUNCTION TESTS 735
Sheldon S. Waldstein, M.D.

SOCIAL POLICIES FOR THE NINETEEN SEVENTIES 765
Wilbur J. Cohen, Under Secretary H.E.W.



U.C. MEDICAL CENTER LIBRARY
OCT 25 1966
San Francisco 94122

University of California
Medical Center Library
3rd & Parnassus
San Francisco 22, Calif.

some allergens are red...



whatever their color, shape, or size...

Benadryl®
(diphenhydramine hydrochloride)
PARKE-DAVIS

for control of allergic symptoms

Whether the allergen is red and round, or unseen and unknown, BENADRYL provides relief of symptomatic distress through its antihistaminic and antispasmodic actions. *PRECAUTIONS:* Persons who have become drowsy on this or other antihistamine-containing drugs, or whose tolerance is not known, should not drive vehicles or engage in other activities requiring keen response while using this product. Hypnotics, sedatives, or tranquilizers if used with BENADRYL should be prescribed with caution because of possible additive effect. Diphenhydramine has an atropine-like action which should be considered when prescribing BENADRYL. *SIDE EFFECTS:* Side reactions, commonly associated with antihistaminic therapy and generally mild, may affect the nervous, gastrointestinal, and cardiovascular systems. Most frequent reactions are drowsiness, dizziness, dryness of the mouth, nausea, and nervousness. BENADRYL is available in Kapseals® of 50 mg. and Capsules of 25 mg. 00666

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

1866 1966 100th ANNIVERSARY

BSP® DISPOSABLE UNIT

BSP® DISPOSABLE UNIT

BSP® DISPOSABLE UNIT

BSP® DISPOSABLE UNIT

BSP® DISPOSABLE UNIT

BSP® DISPOSABLE UNIT

BSP® DISPOSABLE UNIT

BSP® DISPOSABLE UNIT

BSP® DISPOSABLE UNIT

A RELIABLE, PROVEN PRODUCT . . .

The BSP test, introduced in 1925, remains one of the most sensitive laboratory procedures available for determining hepatic function.

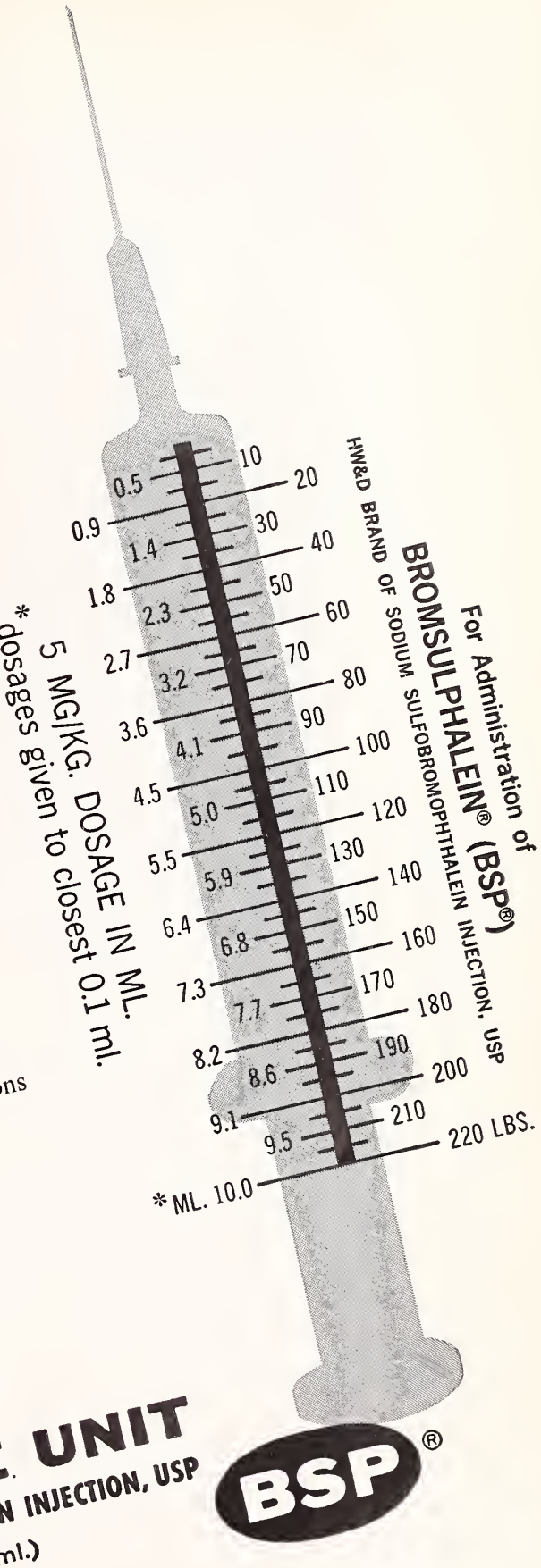
A STERILE, CONVENIENT PUT-UP . . .

Each BSP Disposable Unit contains: a sterile, glass, disposable syringe with the 5 mg./kg. BSP dosage schedule imprinted on the barrel, a sterile needle, alcohol swab and a 7.5 ml. or 10 ml. size ampule of Bromsulphalein.

The BSP unit is designed for maximum patient protection. The precalibrated syringe makes weight calculations unnecessary and provides for proper dosage regardless of patient-weight.

ECONOMICALLY PACKAGED . . .

Prepared for economic unit dispensing, this completely disposable put-up affords a savings in time and labor—the most costly commodities.



BSP® DISPOSABLE UNIT

HW&D BRAND OF SODIUM SULFOBROMOPHTHALEIN INJECTION, USP

(50 mg. per ml.)

HYNSON, WESTCOTT & DUNNING, INC.

BALTIMORE, MARYLAND 21201

(BSP02)



pHisoHex® gives you office "gloves"

antibacterial detergent with 3% hexachlorophene

ROUTINE HANDWASHING with pHisoHex by you and your assistants can keep hands surgically clean in the office—help prevent spread of handborne infection from patient to patient.

pHisoHex contains 3% hexachlorophene. With every washing it leaves an invisible, tenacious film of this powerful bacteriostat on the skin to form a constant barrier against Staph and other pathogens. The pH of pHisoHex is 5.5—the same as the skin and within the pH range where hexachlorophene is most effective.

In a recent four-year study, pHisoHex was introduced for handwashing of 2000 university hospital personnel at the beginning of the third year.[1] By the end of the fourth year, the incidence of *Staph. aureus* infection had been reduced by 32.5%.[2]

pHisoHex is a thorough cleanser. It is nonalkaline, hypoallergenic and "kind" to skin. Supplied in unbreakable, plastic squeeze bottles of 5 oz. and 16 oz. and in plastic bottles of 1 gallon.

Winthrop

Winthrop Laboratories
New York, N.Y. 10016

1. Juhlin, Ingmar, and Ericson, Carl: *J. Hyg.* 63:35, March, 1965. 2. Ericson, Carl, and Juhlin, Ingmar: *J. Hyg.* 63:25, March, 1965.

Arizona Medicine

JOURNAL OF ARIZONA MEDICAL ASSOCIATION

MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO

October, 1966
Vol. 23, No. 10

Table of Contents

EDITOR'S PAGE

ELECTION – NOV. 8th 723
Roland F. Schoen, M.D.

ARIZONA MEDICAL ASSOCIATION REPORTS

PUBLISHING COMMITTEE – July 20, 1966 725
PROFESSIONAL COMMITTEE – July 24, 1966 725

ORIGINAL ARTICLES

PITFALLS OF THYROID FUNCTION TESTS 735
Sheldon S. Waldstein, M.D.
ARIZONA'S MEDICAL MEMORIES 743
Audrey D. Stevens

PRESIDENT'S PAGE

WHAT'S IN A MIRACLE? 751
Paul B. Jarrett, M.D.

DEAN'S PAGE

CLINICAL FACILITIES: FUNCTIONAL DESIGN 755
Merlin K. DuVal, Jr., M.D.

EDITORIALS

PRINCIPLES OF MEDICAL ETHICS (A CONTINUATION) 761
Roland F. Schoen, M.D.
SACRIFICE 763
William B. McGrath, M.D.
SOCIAL POLICY FOR THE NINETEEN SEVENTIES 765
Wilbur J. Cohen, Under Secretary of HEW

CORRESPONDENCE 779

SQUAW PEAK SKETCHES 785

FUTURE MEDICAL MEETINGS 789

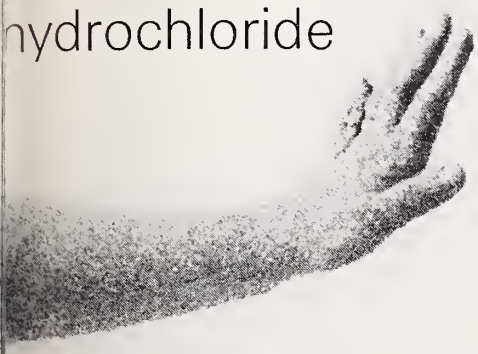
DIRECTORY

OFFICERS AND COMMITTEES 724
MEDICAL SOCIETY OF THE UNITED STATES & MEXICO 724
SOCIEDAD MEDICA DE ESTADOS UNIDOS DE NORTE AMERICA Y MEXICO 724
WOMAN'S AUXILIARY 724
INDEX TO ADVERTISERS Inside Back Cover

Published monthly by The Arizona Medical Association, Inc., with offices at 4601 N. Scottsdale Rd., Suite 201, Scottsdale, Arizona 85251. Subscription $5 a year, single copy 50 cents. Second class postage paid at Scottsdale, Arizona, and at additional mailing offices.



Preludin®
phenmetrazine
hydrochloride





helps keep calories at arm's length

In one double-blind program* involving diet, close doctor/patient cooperation, exercise, posture instruction, and follow-up visits, 93 obese patients received Preludin or a placebo. The drug and placebo were alternated every four weeks. This procedure lasted from 8 to 35 weeks.

Sixty-one percent of the patients lost more weight on Preludin than on placebo. In fact, they lost an average 1.9 pounds per week—almost four times as much as when they were on placebo!

For a decade Preludin has demonstrated similar results. Its effectiveness has been described in more than 300 published clinical reports involving more than 10,000 patients.

Preludin curbs appetite without excessive stimulation. It will work in your weight-control programs too.

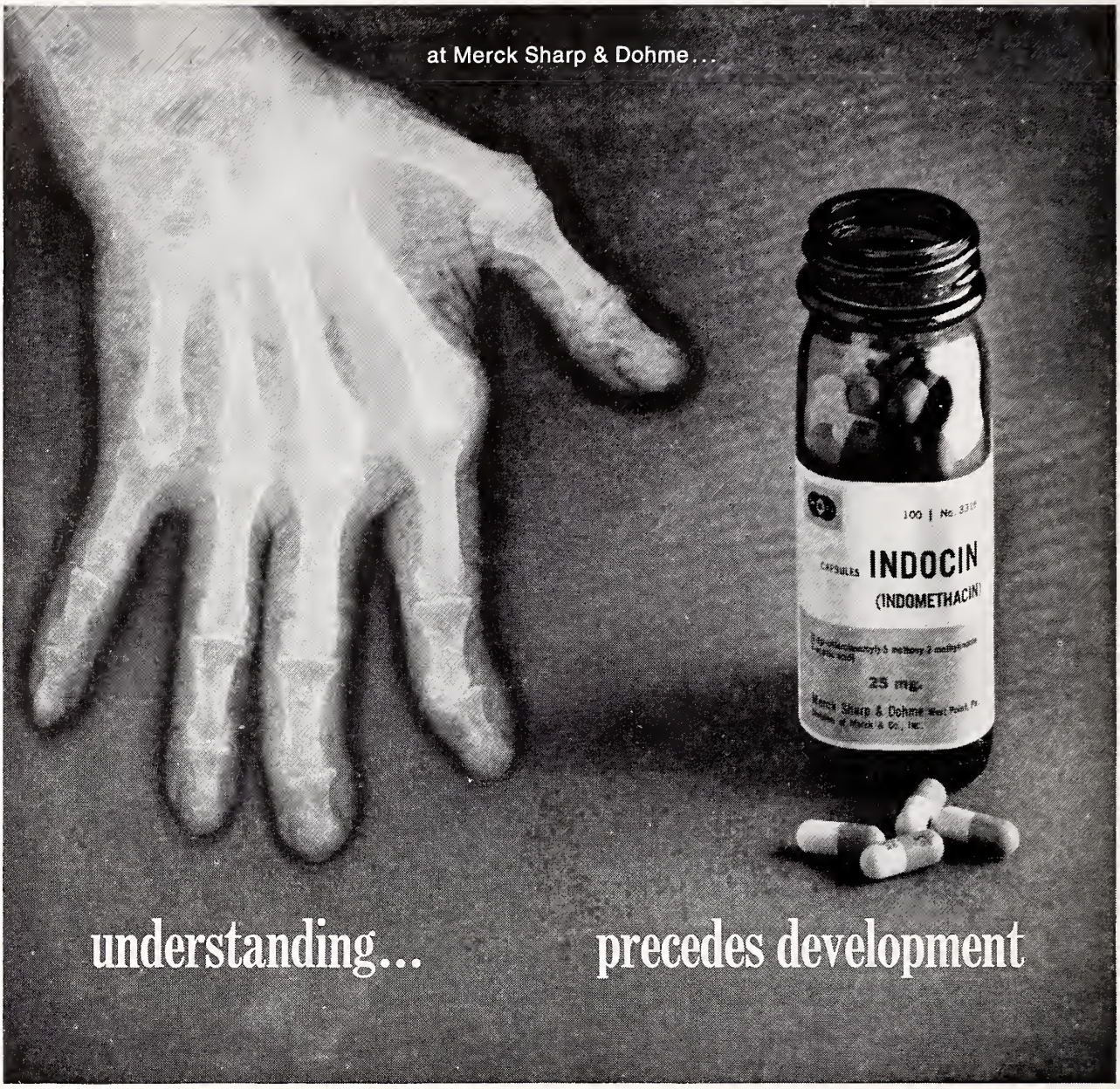
*Barnes, R. H.: J.A.M.A. 166:898, 1958.

Preludin® tablets of 25 mg.
Endurets® prolonged-action tablets of 75 mg.
Dosage: One 25 mg. tablet two or three times daily, or one 75 mg. Endurets tablet once daily.
Contraindications: Severe coronary artery disease, hyperthyroidism, severe hypertension, nervous instability, and agitated prepsychotic states. Do not use with other CNS stimulants, including MAO inhibitors.
Warning: Do not use during the first trimester of pregnancy unless potential benefits outweigh possible risks.
Precautions: Use with caution in *moderate* hypertension and cardiac decompensation. Excessive use may result in a psychotic illness manifested by restlessness, mood or behavior changes, hallucinations, or delusions.
Side Effects: Dryness or unpleasant taste in the mouth, urticaria, and (rarely) overstimulation, insomnia, dizziness, nausea, or headache.

For details, see full Prescribing Information. 6544-III (B)

Under license from Boehringer Ingelheim G.m.b.H.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation, Ardsley, N.Y.



The synthesis of cortisone was accomplished by Merck Sharp & Dohme in 1948—the famous "Compound E" used by Dr. Philip Hench in his historic experiment at the Mayo Clinic.

But proud as we are of our role in the development of cortisone and subsequent corticosteroids, we have continued to seek a greater understanding of arthritic disorders and new drugs for their treatment.

One such drug—INDOCIN® (indomethacin), a nonsteroid, anti-inflammatory agent fundamentally different in structure and activity from other drugs in use—was recently made available for the treatment of arthritic conditions. It opens new possibilities for the long-term management of arthritis and inflammatory disease.

MERCK SHARP & DOHME | **where today's theory is tomorrow's therapy**
Division of Merck & Co., INC., West Point, Pa.

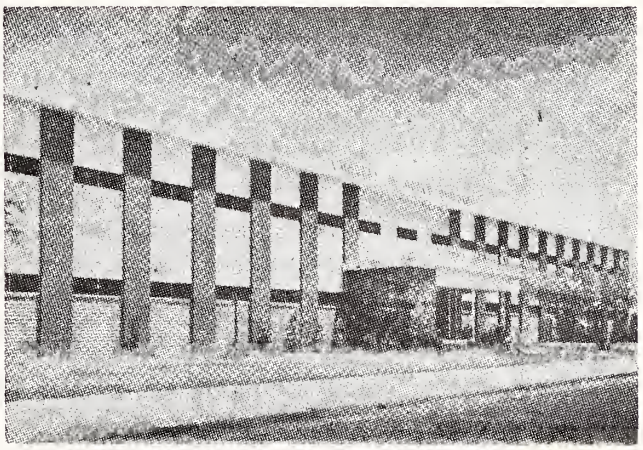
INDOCIN®

INDOMETHACIN

Indications: Chronic and acute rheumatoid arthritis, rheumatoid (ankylosing) spondylitis, degenerative joint disease (osteoarthritis) of the hip, and gout.
Contraindications: Active peptic ulcer, gastritis, regional enteritis, or ulcerative colitis. Safety in pregnancy has not been established. Not recommended for pediatric age groups.
Warning: Patients who experience dizziness, lightheadedness, or feelings of detachment on INDOCIN should be cautioned against operating motor vehicles, machinery, climbing ladders, etc. Use cautiously in patients with psychiatric disturbances, epilepsy, or parkinsonism.
Precautions and Adverse Reactions: Most commonly, headache, dizziness, lightheadedness, G.I. disturbances. The C.N.S. effects are often transient and frequently disappear with continued treatment or reduced dosage. The severity of these effects may occasionally require cessation of therapy. G.I. effects may be minimized by giving the drug with food or with antacids or immediately after meals. Ulceration of the stomach, duodenum, or small intestine has been reported and, in a few instances, severe bleeding with perforation and death. Gastrointestinal bleeding with no obvious ulcer formation has also been noted; INDOCIN should be discontinued if G.I. bleeding occurs. As a result of G.I. bleeding, some patients may manifest anemia, and for this reason periodic hemoglobin determinations are recommended. Rare reports of effects not definitely known to be attributable to INDOCIN include bleeding from the sigmoid colon (either from a diverticulum or without a known previous pathologic condition), perforation of preexisting sigmoid lesions (diverticulum, carcinoma), and hematuria. In other rare cases, a diagnosis of gastritis has been made while the drug was being given. One patient developed ulcerative colitis, and another, regional ileitis, while receiving INDOCIN; when the drug was given to patients with preexisting ulcerative colitis, there was an increase in abdominal pain. Infrequently observed side effects may include drowsiness, tinnitus, mental confusion, depression and other psychic disturbances, blurred vision, stomatitis, pruritus, edema, and hypersensitivity reactions. Slight BUN elevation, usually transient, has been seen in some patients, although the preponderance of evidence indicates that INDOCIN does not adversely affect renal function, even in patients with preexisting renal disease. Nevertheless, renal function should be checked periodically in patients on long-term therapy. Leukopenia has been seen in a few patients. Transient elevations in alkaline phosphatase, cephalin-cholesterol flocculation, and thymol turbidity tests have been observed in some patients and, rarely, elevations of SGOT values; the relationship of these changes to the drug, if any, has not been established. As with any new drug, patients should be followed carefully to detect unusual manifestations of drug sensitivity.
Before prescribing or administering, read product circular with package or available on request.

Baptist Medical Center

HOSPITAL MEDICAL CENTER, LTD.



100 E. FOURTH ST. SCOTTSDALE, ARIZONA

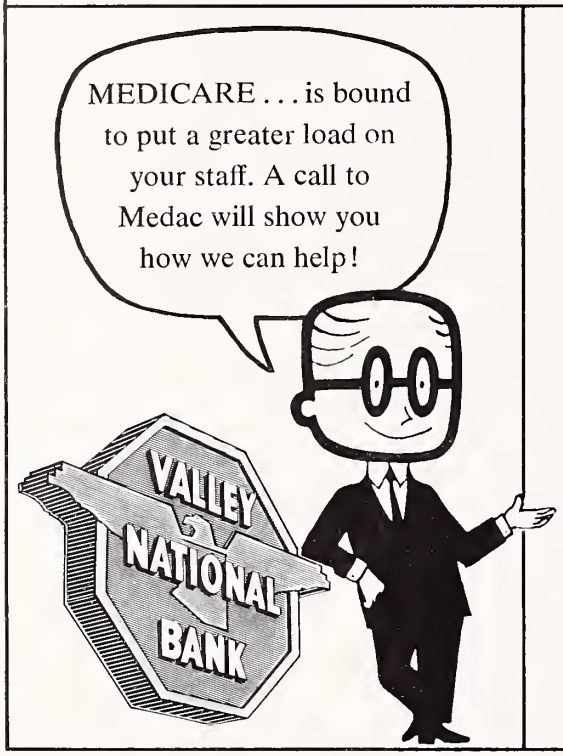
Adjoining Scottsdale Baptist Hospital

ANESTHESIOLOGIST
Sue Boyett, M.D.
FAMILY DOCTOR
Jack E. Groh, M.D.
William B. McGahey, M.D.
John A. Martin III, M.D.
Edward A. Wilson, M.D.
GENERAL SURGERY
Boyd H. Metcalf, M.D.
George H. Mertz, M.D.
Jack O. McFarland, M.D.
GENERAL SURGERY – CANCER
Herbert N. Munhall, M.D.
INTERNAL MEDICINE & CARDIOLOGY
John F. Currin, M.D.
OBSTETRICS & GYNECOLOGY
Roy O. Young, M.D.
OPHTHALMOLOGY
Peter S. Sykowski, M.D., F.A.C.S.
Robert L. Yockey, M.D.
eye physician and surgeon
ORAL SURGERY
Ralph G. Peterson, D.D.S.
ORTHODONTIST
James C. Toye, D.D.S.
ORTHOPEDIC SURGERY
Edward E. Conn, M.D.
Malcolm F. Dorfman, M.D.
Willard S. Hunter, M.D.
PATHOLOGY
Thomas B. Jarvis, M.D.
Fred C. Schoene, M.D.
PERIODONTIST
J. Richard Loughry, D.D.S.
PLASTIC SURGERY
Morris Barton, M.D.
THORACIC CARDIOVASCULAR SURGERY
Carl Impellitier, M.D.
UROLOGIC SURGERY
Wilfred M. Potter, M.D.
RADIOLOGY
M. Herbert Nathan, M.D.
DENTISTRY
Lumone E. Willmeng, D.D.S.
OTHERS
Jean Hoffman, Reg. Physical Therapist
Pharmacy
Scottsdale Opticians

For Leasing Information Call
946-9091 or 946-5344

Doctor: Cut your billing and bookkeeping costs!

The Valley Bank offers you "Medac" – Arizona's most *complete*, automated medical-dental billing-bookkeeping service.



* Speeds your accounts receivable collections.
* Gives you up-to-the-minute reports of your balance sheet and P.&L. as frequently as every ten days.
* Provides smooth, efficient continuity despite personnel turnover.

This is a dependable, accurate, *quality* service which we believe to be the best in the U.S. The doctors we now serve are delighted with its results.

Before you consider *any* service system, let a VNB representative show you the very real advantages of VNB-MEDAC – at your convenience (and without obligation).

CONTACT ANY VALLEY BANK OFFICE

or phone:

in Phoenix
Bud Gray **261-1317**

in Tucson
Don Markle **624-8711**

MEDICINE IN TERRITORIAL ARIZONA

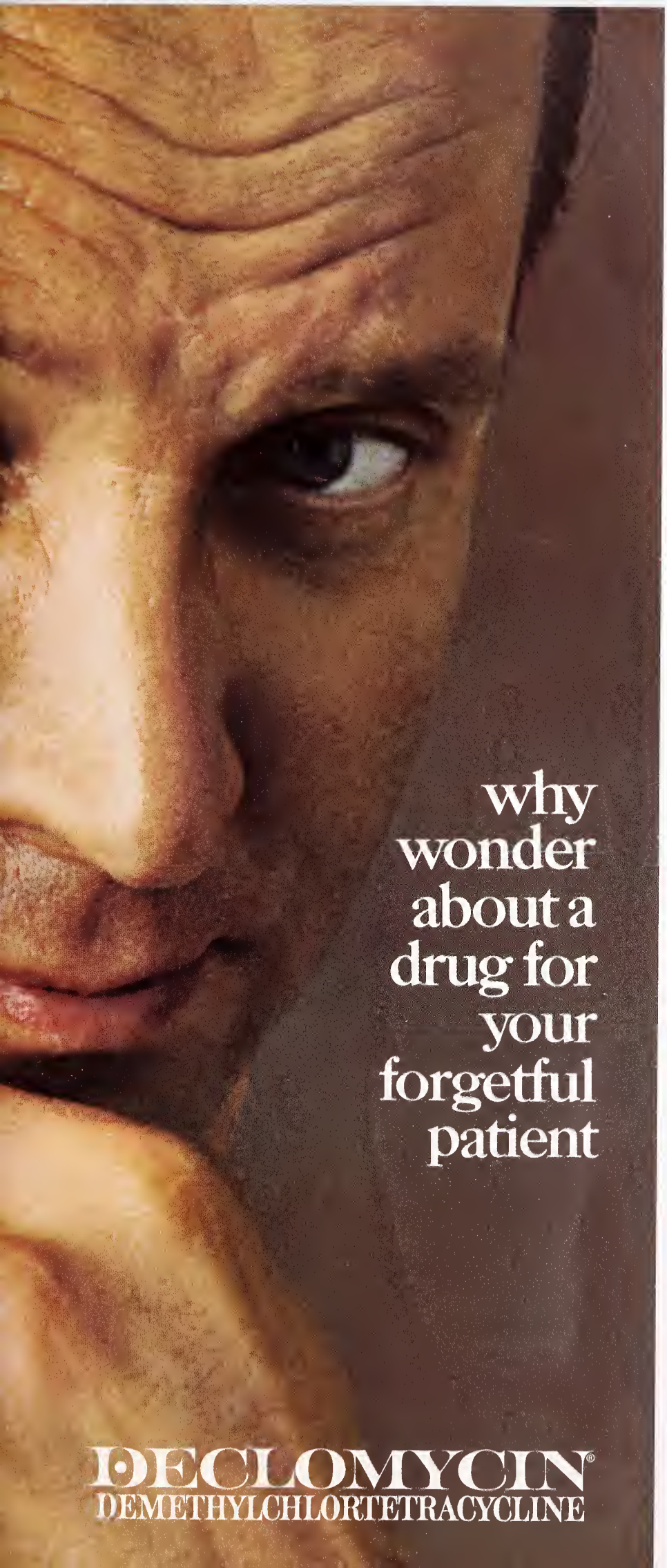
by

Frances E. Quebbeman

LIMITED NUMBER OF AUTOGRAPHED COPIES NOW AVAILABLE

$7.50 each

Arizona Medical Association
4601 N. Scottsdale Road — Suite 201
Scottsdale, Arizona


why
wonder
about a
drug for
your
forgetful
patient
DECLOMYCIN®
DEMETHYLCHLORTETRACYCLINE

-more convenient

-more easily remembered

DECLOMYCIN®
DEMETHYLCHLORTETRACYCLINE
300 mg FILM COATED TABLETS
are made for b.i.d.

Effective in a wide range of everyday infections—respiratory, urinary tract and others—in the young and aged—the acutely or chronically ill—when the offending organisms are tetracycline-sensitive.

Contraindication—History of hypersensitivity to demethylchlortetracycline.

Warning—In renal impairment, usual doses may lead to excessive systemic accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort.

Precautions and Side Effects—Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. Use of demethylchlortetracycline during tooth development (last trimester of pregnancy, neonatal period and early childhood) may cause discoloration of the teeth (yellow-grey-brownish). This effect occurs mostly during long-term use but has also been observed in short treatment courses. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment. Side reactions include glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and dermatitis. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Anaphylactoid reactions have been reported.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products.

Capsules: 150 mg; *Tablets:* film coated, 300 mg, 150 mg, and 75 mg of demethylchlortetracycline HCl.

Lederle LEDERLE LABORATORIES
A Division of American Cyanamid Company, Pearl River, New York
422-6-4071

co–op.er.a.tion, co.op.er.a.tion, co.op.ēr.a.tion
(kō–op'er–ā'shen), n. 1. a co–operating; joint effort the benefits of which are shared by all members.

UP TO $1,000 MONTHLY BENEFIT
NOW AVAILABLE
ON A STATEWIDE BASIS - MEANS STABILITY

Disability Insurance pays...not only when you're sick or injured...but also in "peace of mind" when you're well!
"The Only Known Substitute for Earning Power"

NATIONAL CASUALTY COMPANY
OF DETROIT, MICHIGAN

Arizona Representatives

PHOENIX ★ CHARLES A. de LEEUW
3424 NORTH CENTRAL AVENUE
(PHONE 266–2403)

TUCSON ★ RONALD E. DEITRICH
SUITE 9, PIMA PLAZA, 2030 E. BROADWAY
(PHONE 623-7941)

Approved and Recommended by the
MEDICAL ECONOMICS COMMITTEE AND THE COUNCIL
...SINCE 1953

HOBBY HORSE RANCH SCHOOL

A School For Exceptional Children

The Hobby Horse Ranch School is both home and school for a small group of children. It welcomes the child who is mentally retarded and physically handicapped as well as the backward child who suffers no physical handicap.

The Hobby Horse Ranch School is a branch of Fairview School in Fishkill, New York which was established in 1936.

Directors: Blanche C. Lightowler, B.A.
Matthew W. Lightowler

P.O.B. 44, Cortaro, Ariz.

PARAMUS COIN EXCHANGE

The East's Largest Coin Exchange

OFFERS U.S. GOLD FOR YOUR FUTURE
ALL BRILLIANT UNCIRCULATED

$20 Gold pieces		**$3 Gold pieces**	
Liberty	$ 54.95		$349.00
St. Gaudens	$ 54.95	**$2.50 Gold pieces**	
$10 Gold pieces		Liberty	$ 52.95
Liberty	$ 32.95	Indian	$ 32.95
Indian	$ 52.95	**$1 Gold pieces**	
$5 Gold pieces		Type 1	$ 49.95
Liberty	$ 23.95	Type 2	$250.00
Indian	$ 32.95	Type 3	$ 75.00

SETS

Liberty Gold Type Set	4 Coins	$159.95
Indian Gold Type Set	4 Coins	$169.95

ALL COINS IN CUSTOM PLASTIC CASES

U. S. SILVER DOLLARS	Single	$2.00
BRILLIANT	Roll	$39.95
UNCIRCULATED	Bag	$1695.00

Gold and Silver is Today's Best Investment

Paramus Coin Exchange **A.N.A. Member**
Bergen Mall Shopping Center
Paramus, N.J. 07652 **201-342,2600**

Gentlemen: Please ship the following:

NAME
ADDRESS
CITY STATE
BILL MY D.C. ACCT. #.....
BILL MY AMER. EXP. ACCT. #.....
For other coin values send for free catalogue!

MOLECULAR REMODELING—

laboratory exercise or clinical necessity?

More than twenty-five years have passed since the discovery of the diuretic activity of sulfanilamide started pharmacologists on a succession of molecular remodelings to find the ideal diuretic.

Diuresis—a sought-after clinical effect from an unwanted side effect

It started in 1937 when a clinician reported that the administration of a sulfonamide was sometimes accompanied by an unexplainable side effect—metabolic acidosis.[1] Three years later the side effect was explained. The sulfonamide radical of sulfanilamide inhibited carbonic anhydrase,[2] the enzyme responsible for converting carbon dioxide and water to hydrogen ions and bicarbonate ions.

Later, other investigators showed by dog experiments that metabolic acidosis probably resulted when the inhibition of carbonic anhydrase upset the exchange of hydrogen and sodium ions, causing increased excretion of sodium as the bicarbonate.[3]

It was twelve long years after the first report of the unexplainable side effect (metabolic acidosis) that it was finally shown that large doses of sulfanilamide administered to edematous patients were indeed capable of promoting diuresis.[4] However, the possibility of toxic effects from its prolonged use and its relatively weak diuretic action made it impractical for clinical use as a diuretic.[5]

Because the inhibition of carbonic anhydrase seemed to be the key to effective diuresis, investigators began to look for more potent enzyme inhibitors —in the hopes that they would be more effective diuretics.

The most important of these early compounds, acetazolamide, enjoyed several years of fairly wide clinical use.

Its carbonic anhydrase inhibitory activity was several hundred times greater than that of sulfanilamide.[6] The increase in inhibitory activity, however, increased not only the excretion of sodium and bicarbonate ions, but also the excretion of potassium.[7] And, like its predecessor, acetazolamide precipitated mild acidosis. Its prolonged use could result in hypokalemic acidosis.[7]

The 'thiazides'—an answer to the metabolic acidosis caused by carbonic anhydrase inhibition

Despite the fact that the sulfonamide group appeared to be responsible for carbonic anhydrase inhibition which in turn appeared to be responsible for diuresis, investigators began to synthesize compounds with structural alterations to the sulfonamide group.

The first major breakthrough came with the synthesis of chlorothiazide. Altering the sulfonamide group did indeed alter the ability of chlorothiazide to inhibit carbonic anhydrase—it was only 1/10th as potent as acetazolamide in inhibiting the enzyme.[8] Despite the drop in inhibitory potency, however, chlorothiazide proved to be an effective diuretic—an observation that led to the conclusion that its diuretic action was due to some mechanism other than its action on carbonic anhydrase.[9,10]

For effective diuresis, chlorothiazide was administered in daily dosages ranging from 250 to 2000 mg.[11] It increased the excretion of sodium and chloride; and, to a lesser extent, potassium and bicarbonate.[11] The excretion of potassium appeared to be maximal at higher dose levels at which, theoretically, the carbonic anhydrase inhibitory effect is more active.[11] Its prolonged use, therefore, could sometimes result in metabolic hypokalemic, hypochloremic alkalosis.[7]

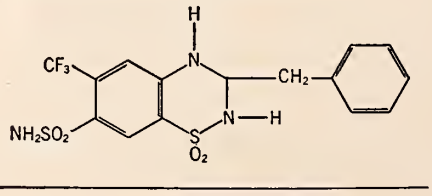
Naturetin—effective diuresis with more favorable electrolyte balance

Other thiazides followed—with improvements being aimed at two particular areas: 1. attempts to increase diuretic action in relation to the milligram potency of the drug, and 2. attempts at a more favorable sodium/potassium ratio in the urine, i.e., to decrease the excretion of potassium while maintaining the excretion of sodium.[12]

One of these, Naturetin, Squibb Bendroflumethiazide, has made advances on both these points. "By adding a 3-benzyl radical to hydroflumethiazide a rather dramatic reduction in dose range is accomplished. With this drug, effective sodium excretion is obtained with doses between 2.5 and 10 mg., which is a 200 to 1 ratio as compared to chlorothiazide..."[13]

Moreover, due probably to its virtual lack of carbonic anhydrase inhibition, Naturetin (bendroflumethiazide) has been shown to cause less potassium and bicarbonate loss and less alteration in urinary pH than either chlorothiazide or hydrochlorothiazide.

Naturetin is outstandingly effective not only in establishing, but also in maintaining, excretion of retained fluid in edematous patients. And its duration of action is sufficiently prolonged to allow a single daily administration in most patients. Naturetin is also an effective antihypertensive agent.



Contraindications: Severe renal impairment; previous hypersensitivity.

Warning: Ulcerative small bowel lesions have occurred with potassium-containing thiazide preparations or with enteric-coated potassium salts supplementally. Stop medication if abdominal pain, distension, nausea, vomiting, or G.I. bleeding occur.

Precautions: The dosage of ganglionic blocking agents, veratrum, or hydralazine when used concomitantly must be reduced by at least 50% to avoid orthostatic hypotension. Electrolyte disturbances are possible in cirrhotic or digitalized patients.

Side Effects: Bendroflumethiazide may cause increases in serum uric acid, unmask diabetes, increase glycemia and glycosuria in diabetic patients and may cause hypochloremic alkalosis, hypokalemia; cramps, pruritus, paresthesias, and rashes may occur.

Supplied: Naturetin (Squibb Bendroflumethiazide) 5 mg. and 2.5 mg. tablets. Also available Naturetin c K [Squibb Bendroflumethiazide (5 or 2.5 mg.) with Potassium Chloride (50 mg.)]. For full information, see Product Brief

References: **1.** Southworth, H.: Proc. Soc. Exper. Biol. & Med. *36*:58, 1937. **2.** Mann, T. and Keilin, D.: Nature *146*:164, 1940. **3.** Pitts, R. F., and Alexander, R. S.: Am. J. Physiol. *144*:239, 1945. **4.** Schwartz, W. B.: New England J. Med. *240*:173, 1949. **5.** Friedberg, C. K., in Moyer, J. H., and Fuchs, M.: Edema: Mechanisms and Management, Philadelphia, W. B. Saunders Co., 1960, p. 259. **6.** Cumming, J. R.; Tabachnick, E., and Seelig, M., in Moyer, J. H., and Fuchs, M.: op. cit., p. 25. **7.** Werko, L., in Moyer, J. H., and Fuchs, M.: op. cit., p. 188. **8.** Beyer, K. H., Jr., in Moyer, J. H., and Fuchs, M.: op. cit., p. 274. **9.** Maren, T. H., and Wiley, C. E.: J. Pharmacol. & Exper. Therap. *143*:230, 1964. **10.** Earley, L. E., and Orloff, J.: Ann. Rev. Med. *15*:14, 1964. **11.** Fuchs, M., and Mallin, S. R., in Moyer, J. H., and Fuchs, M.: op. cit., p. 27. **12.** Ford, R. V., in Moyer, J. H., and Fuchs, M.: op. cit., p. 290. **13.** cited in Fuchs, M., and Mallin, S. R. (ref. 11): op. cit., p. 283.

Naturetin®
SQUIBB BENDROFLUMETHIAZIDE
to reduce excess fluid
or high blood pressure

ARIZONA MEDICINE

Roland F. Schoen, M.D. Editor
Mr. Bruce E. Robinson Managing Editor
Mrs. Evelyn Kuebler Editorial Assistant

ASSISTANT EDITORS
Original Articles

Mayer Hyman, M.D. — Preston J. Taylor, M.D.
Kenneth Johnson, M.D. — Robert F. Lorenzen, M.D.

Editorial Section

R. Lee Foster, M.D. — William B. McGrath, M.D.
John R. Green, M.D. — Leslie B. Smith, M.D.
John W. Kennedy, M.D.

ASSOCIATE EDITORS

Earl J. Baker, M.D. Civil Defense
Max Baumeister, Jr., M.D. Anesthesiology
Chester G. Bennett, M.D. General Surgery
William E. Crisp, Jr., M.D. Obstetrics and Gynecology
Philip E. Dew, M.D. Pediatrics
Charles W. Elkins, M.D. Neurosurgery
Eugene Leibsohn, M.D. Dermatology
James D. Nauman, M.D. .. Medical Society of U.S. & Mexico
William M. Hindman, M.D. Pathology
C. Thomas Read, M.D. Thoracic Surgery
Wallace A. Reed, M.D. Medical Economics
Paul L. Singer, M.D. Genito-Urinary
George A. Spendlove, M.D. Public Health
Alvin L. Swenson, M.D. Orthopedics
William G. Ure, M.D. Tuberculosis

Editorials of Arizona Medicine are the opinions of the authors and do not necessarily represent the official stand of The Arizona Medical Association, Inc. The opinions of the Board of Directors may be sought in the published proceedings of that body.

Address all correspondence to the
Journal Offices
4601 N. Scottsdale Rd., Scottsdale, Ariz. 85251

Bruce E. Robinson
Business Manager

National Representative
State Journals West
Melvin B. Tyler, Advertising Manager
693 Sutter Street
San Francisco, California 94102

"The material in this journal is not copyrighted. We ask that anyone using material from it note the previous publication in ARIZONA MEDICINE."

CONTRIBUTIONS

The Editor sincerely solicits contributions of scientific articles for publication in ARIZONA MEDICINE. All such contributions are greatly appreciated. All will be given equal consideration.

Material submitted for publication in ARIZONA MEDICINE should conform to the following policies:

1. Manuscripts, including references or bibliography, should be typewritten, double-spaced, on one side of the paper only, and the original and a carbon enclosed.
2. Be guided by the general rules of medical writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.
3. Although the Editors try to catch inaccuracies, the ultimate responsibility is the author's.
4. Articles are accepted for publication only if they are contributed exclusively to this Journal. Ordinarily, contributors will be notified within 60 days if a manuscript is accepted for publication. Every effort will be made to return unused manuscripts.
5. The Journal reserves the right to edit all material.
6. Reprints will be supplied to the author at printing cost.

ELECTION — NOV. 8th

It has long been the policy of ARIZONA MEDICINE to offer to its readers not only the choice of the professional articles which cross its editorial desk, but to print non-professional articles which stimulate evaluation, deliberation, and solution of many problems which face the physicians of the State of Arizona.

Next month, November 8th, we go to the polls to vote in a national election. It is neither the purpose nor the prerogative of ARIZONA MEDICINE to instruct individuals HOW to vote, but it is definitely within our scope of influence to stimulate each individual TO VOTE as he pleases.

ARIZONA MEDICINE feels that a rational choice between the candidates for various offices may better be reached by the reproduction on page 765 of the remarks made by Wilbur J. Cohen, Under Secretary of the Department of Health, Education, and Welfare, to a group of social workers in May 1966. The remarks are titled "Social Policies for the Nineteen Seventies". This in itself is quite an innocuous title. Other obvious titles will come to mind as the article is read. The article reached ARIZONA MEDICINE from Dallas Whaley, the AMA Field Representative for this area. His basic memorandum to our Central Office is sufficient introduction for the article.

We, too, believe that now is a wonderful time to be alive, to work, to think, to write, to speak, and seek and strive for new and imaginative ways to make a new and better world, but we would first seek solutions to a rapidly inflating dollar; a halt and reduction of rapidly increasing costs of living; a more deliberate and sound fiscal planning; a thoughtfully administered poverty and educational program, and a repeated application of Government OF the people, BY the people, and FOR the people.

Read the article beginning on page 765. Then vote for the candidates of your choice.

BUT VOTE

Roland F. Schoen, M.D.
Editor

DIRECTORY

THE ARIZONA MEDICAL ASSOCIATION, INC., Organized 1892, 4601 N. Scottsdale Road, Scottsdale, Arizona 85251.

OFFICERS AND DIRECTORS — 1966-67

President—Paul B. Jarrett, M.D. 2021 N. Central Ave., Phoenix, Arizona
President-Elect—Arnold H. Dysterheft, M.D. McNary Hospital, McNary, Arizona
Vice President—Arthur V. Dudley, Jr., M.D. Bldg. 23, Med. Sq., 1601 N. Tucson Blvd., Tucson, Arizona
Secretary—Charles E. Henderson, M.D. 909 East Brill Street, Phoenix, Arizona
Treasurer—Fred H. Landeen, M.D. 2222 North Craycroft Rd., Tucson, Arizona
Speaker of the House—Walter Brazie, M.D. P. O. Box 631, Kingman, Arizona
Editor-in-Chief—Roland F. Schoen, M.D. 1023 E. Florence Blvd., Casa Grande, Arizona
Delegate to AMA—Dermont W. Melick, M.D. 909 East Brill Street, Phoenix, Arizona
Delegate to AMA—William B. Steen, M.D. 116 North Tucson Boulevard, Tucson, Arizona
Alternate Delegate to AMA—Daniel T. Cloud, M.D. 2021 North Central Ave., Phoenix, Arizona
Alternate Delegate to AMA—Philip G. Derickson, M.D. 744 N. Country Club Rd., Tucson, Arizona

DISTRICT DIRECTORS

Central District—Jack E. Brooks, M.D. 2021 N. Central Ave., Phoenix, Arizona
Central District—Richard O. Flynn, M.D. 2210 S. Mill Ave., Tempe, Arizona
Central District—W. Shaw McDaniel, M.D. 461 W. Catalina Dr., Phoenix, Arizona
Central District—Robert A. Price, M.D. 3602 N. 15th Ave., Phoenix, Arizona
Central District—Noel G. Smith, M.D. 3614 N. 15th Ave., Phoenix, Arizona
Northeastern District—Harry S. Beckwith, M.D. East 2nd & Colorado Ave., Winslow, Arizona
Northwestern District—Hugh E. Dierker, M.D. 505 North Beaver Street, Flagstaff, Arizona
Southeastern District—Deward G. Moody, M.D. Stage Building, Nogales, Arizona
Southern District—Warren D. Eddy, M.D. 601 N. Wilmot Road, Tucson, Arizona
Southern District—Richard L. Dexter, M.D. 116 N. Tucson Boulevard, Tucson, Arizona
Southern District—Hermann S. Rhu, Jr., M.D. 5th & Alvernon Way, Tucson, Arizona
Southwestern District—Howard W. Finke, M.D. Magma Hospital, Superior, Arizona

SOCIEDAD MEDICA DE ESTADO UNIDOS DE NORTE AMERICA Y MEXICO

President—L. Maxwell Lockie, M.D. 130 Morris Ave., Buffalo 14, New York
President-Elect—Alfonso Topete Duran, M.D. Edificio Professional, Juarez y Pavo, Guadalajara, Jalisco, Mexico
Vice President—James Nauman, M.D. 1603 N. Tucson Blvd., Tucson, Arizona
Secretary for the United States—Earl J. Baker, M.D. 550 W. Thomas Road, Phoenix, Arizona
Secretary for Mexico—Felix Michel, M.D. Pavo 112, Guadalajara, Jalisco, Mexico
Treasurer for the United States—Lucy A. Vernetti, M.D. 333 West Thomas Road, Phoenix, Arizona
Treasurer for Mexico—Eduardo Gonzales Murguia, M.D. Juarex 673, Guadalajara, Jalisco, Mexico
Executive Secretary for Mexico—Mr. Alfredo E. Patron Mazatlan, Sinaloa, Mexico

COMMITTEES — 1966-67

NOTE: The President, President-elect and Secretary are ex-officio members of all Committees unless otherwise specified.

ARTICLES OF INCORPORATION & BY-LAWS COMMITTEE: Walter Brazie, M.D., Chairman (Kingman)

BENEVOLENT & LOAN FUND COMMITTEE: Daniel T. Cloud, Jr., M.D., Chairman (Phoenix)

CENTRAL OFFICE ADVISORY COMMITTEE: Charles E. Henderson, M.D., Chairman (Phoenix)

GRIEVANCE COMMITTEE: William B. Steen, M.D., Chairman (Tucson)

HISTORY & OBITUARIES COMMITTEE: Robert S. Flinn, M.D., Chairman (Phoenix)

INDUSTRIAL RELATIONS COMMITTEE: Derald G. May, M.D., Chairman (Phoenix)

LEGISLATIVE COMMITTEE: Carlos S. Craig, M.D., Chairman (Phoenix)

MEDICAL ECONOMICS COMMITTEE: Ian M. Chesser, M.D., Chairman (Tucson)

PROCUREMENT & ASSIGNMENT COMMITTEE: Joseph M. Greer, M.D., Chairman (Phoenix)

PROFESSIONAL COMMITTEE: William G. Payne, M.D., Chairman (Tempe)

PUBLIC RELATIONS COMMITTEE: Arthur V. Dudley, Jr., M.D., Chairman (Tucson)

PUBLISHING COMMITTEE: Roland F. Schoen, M.D., Chairman (Casa Grande)

SCIENTIFIC ASSEMBLY COMMITTEE: Edward Sattenspiel, M.D., Chairman (Phoenix)

COUNTY MEDICAL SOCIETY OFFICERS, 1966

APACHE: W. Duncan Spining, M.D., President, Sage Memorial Hospital, Ganado; Ellis W. List, Jr., M.D., Secretary, McNary Hospital, McNary.

COCHISE: Raymond Grossman, M. D., President, Drawer 1059, Douglas 85607; Jorge Gaytan, M.D., Secretary, Drawer S. Douglas.

COCONINO: Hugh E. Dierker, M.D., President, 505 N. Beaver Street, Flagstaff; R. T. McDonald, M.D., Secretary, 713 N. Beaver Street, Flagstaff.

GILA: David B. Gilbert, M.D., President, Physicians & Surgeons Clinic, Payson; Alford D. Musgrave, Jr., M.D., Secretay, 703 Ash Street, Globe.

GRAHAM: John H. Walker, M.D., President, 702 8th Avenue, Safford.

GREENLEE: Gerhard L. Ihm, M.D., President, Phelps Dodge Hospital, Morenci; James W. Gilbert, M.D., Secretary, P. O. Box 1537, Clifton.

MARICOPA: Ray Fife, M.D., President, 2620 N. 3rd Street, Phoenix; Charles H. Finney, M.D., Secretary, 555 W. Catalina Dr., Phoenix.
(Society Office — 2025 North Central Avenue Phoenix)

MOHAVE: John G. Lingenfelter, M.D., President, 412 E. Oak Street, Kingman; John J. Standifer, M.D., Secretary, 412 E. Oak Street, Kingman.

NAVAJO: Claude H. Peterson, M.D., President, 1500 Williamson Ave., Winslow; Leo L. Lewis, M.D., Secretary, Santa Fe Medical Offices, P. O. Box 673, Winslow.

PIMA: Darwin W. Neubauer, M.D., President, 720 N. Country Club Drive, Tucson; Seymour A. Shapiro, M.D., Secretary, Bldg. 24, Med. Square, 1601 N. Tucson Blvd., Tucson. (Society Address: 2555 East Adams Street, Tucson)

PINAL: Chalmers D. Johnson, M.D., President, 1195 N. Arizona Blvd., Coolidge; Richard F. Adamson, M.D., Secretary, Florence Medical Center, Florence.

SANTA CRUZ: Charles S. Smith, M.D., Secretary, Gebler Building, Nogales.

YAVAPAI: Dennis R. Semkin, M.D., President, 533 W. Gurley Street, Prescott; William R. Shepard, M.D., Secretary, 1003 Division Street, Prescott.

YUMA: James Volpe, Jr., M.D., President, P. O. Box 1151, Harold N. Gordon, M.D., Secretary, 1832 8th Avenue, Yuma. (Society Address — P. O. Box 4370, Kofa Substation, Yuma)

WOMAN'S AUXILIARY TO THE ARIZONA MEDICAL ASSOCIATION — 1966-67

President Mrs. Robert G. Delph (Grace)
2019 North Crescent Drive, Flagstaff, Arizona

President-Elect Mrs. Elvie B. Jolley (Mila)
Box 919, Bisbee, Arizona

1st Vice President Mrs. Richard Hardenbrook (Kaaren)
316 Grove Avenue, Prescott, Arizona

2nd Vice President Mrs. Charles Matheus (Marilyn)
2148 East 25th Street, Yuma, Arizona

Secretary Mrs. Richard Timmons (Evelyn)
5302 N. 69th Place, Scottsdale, Arizona

Treasurer Mrs. James Parsons (Carolyn)
5251 E. Hawthorne Pl., Tucson, Arizona

Director Mrs. James B. Tucker (LaVerne)
700 East 10th Street, Casa Grande

PUBLISHING COMMITTEE

Meeting of the Publishing Committee of The Arizona Medical Association, Inc., held Wednesday, July 20, 1966, in the Kudu Room of the Safari Hotel, Scottsdale, Arizona, convened at 7:45 P.M., Roland F. Schoen, M.D., Editor, Chairman, presiding.

ROLL CALL

PRESENT:

Drs. Bennett, Chester G.; Foster, R. Lee; Green, John R.; Henderson, Charles E., Secretary; Jarrett, Paul B., President; Lorenzen, Robert F.; Schoen, Roland F., Editor, Chairman; Taylor, Preston J.

Staff: Carpenter, Robert; Robinson, Bruce E.

EXCUSED:

Drs. Dysterheft, Arnold H., President-Elect; Hindman, William M.; McGrath, William B.

MINUTES

It was moved and unanimously carried that the Minutes of the meeting of June 3, 1965, be approved as distributed.

FINANCIAL REPORT

Mr. Robinson presented the financial report for the first six months of 1966 as compared with the first six months of 1965. He pointed out that our net gain is $3,735.70 greater this year as compared to last year. Advertising income is up, while operating expenses are down.

GENERAL EVALUATION

Much discussion ensued on the evaluation of various sections of the Journal with the following changes recommended:

1. That the Table of Contents follow its present format, but that it uniformally appear on page three in each issue.
2. That the suggested new Directory layout be used, with it appearing on the left-hand page facing the "Reports" section.
3. That the layout of the Editor's Page be altered so that the Editorial Board listing appear in the left-hand column with the Editorial comment appearing in the right-hand column.
4. That, due to space shortage, we would discontinue the regular "Blue Shield" page. In the future, articles submitted by Blue Shield would be reviewed as other articles are, and the decision as to whether they will be printed will be made for each issue.
5. It was agreed to continue the practice of listing on the "Future Meetings" page only those meetings being held in the western part of the United States.
6. Due to the dwindling number of Professional Card listings in the Journal, considerable discussion was held on the various aspects of this section of the Journal.

 It was moved and unanimously carried that we would set up a six-month trial period during which every effort would be made to increase the Professional Card listings to a total of not less than 50. If at the end of the six-month period we did not have 50 listings, this section of the Journal would be discontinued.

OTHER BUSINESS

BOOK REVIEWS:

It was agreed that we would reinstate a Book Review section. The reviewing editor is to maintain possession of the book reviewed.

FOLD-OUT COVER:

The advisability of utilizing a "fold-out" cover was discussed at great length. It was determined not to go into a "fold-out" cover at this time.

MEETING ADJOURNED AT 10:05 P.M.

Charles E. Henderson, M.D.
Secretary

PROFESSIONAL COMMITTEE

Meeting of the Professional Committee of The Arizona Medical Association, Inc., held Sunday, July 24, 1966, in the Convention Center of the Safari Hotel, 4611 North Scottsdale Road, Scottsdale, Arizona, convened at 10:10 a.m., William G. Payne, M.D., Chairman, presiding.

ROLL CALL

PRESENT:

Drs. Frissell, Ben P.; Henderson, Charles E., Secretary; Jarrett, Paul B., President; Kohl, Jr., Harold W.; McDaniel, W. Shaw; Melick, Dermont W.; Payne, William G., Chairman; Steen, William B.; Wagner, Albert G.

STAFF:

Messrs. Carpenter, Robert, Executive Secretary; Robinson, Bruce E., Assistant Executive Secretary.

GUESTS:

Drs. Edwards, Walter V., Member of the Subcommittee on Industrial Health, substituting for Dr. Ray Fife; Spendlove, George A., Commissioner, Arizona State Dedepartment of Health, Ex Officio.

EXCUSED:

Drs. Baker, Earl J.; Brooks, Jack E.; Dexter, Richard L.; Dysterheft, Arnold H., President-Elect; Fife, Ray; Landeen, Fred H.; May, Derald G.; Wood, MacDonald.

MINUTES

Approved Minutes of the Professional Committee meeting held January 30, 1966.

COMMUNITY COUNCIL OF PHOENIX

The Community Council of Phoenix seeks a delegate representative of this Association to serve on its Advisory Committee to participate in its undertaking of a three-month's Study of the Aging. The function of the Advisory Committee will be to counsel, to cooperate, to facilitate acquisition of data, and to review and evaluate the findings and recommendations of the Study. Dr. Payne reported he hopes to be in position shortly to designate such delegate, which individual, he hopes, will, likewise, serve as a member of Dr. Kohl's Subcommittee on Aging and General Medicine.

SUBCOMMITTEE REPORTS

Aging and General Medicine

CHAIRMAN — Harold W. Kohl, Jr., M.D., designated Chairman.

NATIONAL DIABETES WEEK — Dr. Kohl attached importance to the National Diabetes Week, which usually occurs in October and should be adequately publicized. It was suggested that such project could be developed through development of his Subcommittee membership, having a section on diabetes headed, possibly, by an internist who has special interest in this field either in

Pima or Maricopa counties or both. It was further suggested that, possibly, the Arizona Pharmaceutical Association might be interested in such a joint program operating through its pharmacists. "Kits" for home detection could be obtained and distributed through them, alerting the participants, of course, that a negative result does not necessarily mean that they have diabetes, but under such circumstances, they could be urged to see their family physician for follow-up. It might well be that the American Diabetes Association might be in position to furnish kits or otherwise participate financially in such project. The Chairman was urged to develop such a program.

ALCOHOLISM — The subject of "alcoholism" was discussed. Here is another project which could be developed as a section of activity of this Subcommittee. The Governor has appointed a Committee on Alcoholism of which W. Albert Brewer, M.D., (Phoenix) is a member. Alcoholism is a disease and should be treated as such. Effort is being made to organize local committees, and they should contain doctors who have special interest in the problem. A budget of $15,000.00 is available.

AGING — A Governor's Committee on Aging has been appointed and responsibility therefor has been placed under the Arizona State Department of Health. Guy B. Atonna, M.D., (Douglas) is a member. Dr. Spendlove reviewed this activity.

The Chairman was urged to expand the membership of his Subcommittee to include those members who have special interest in the projects to be undertaken.

Allied Medical Groups

A Chairman of this Subcommittee has yet to be designated.

ARIZONA BAR LIAISON — In the absence of Dr. Brooks, no report was received in the matter of exploration of the desirability of a liaison meeting between the Arizona Bar and this Association.

NARCOTICS PRESCRIPTIONS — The Arizona State Board of Pharmacy again called attention to statutory requirements in the matter of Class A narcotics (requiring a signed prescription to be in the hands of the pharmacist or his agent, such as a delivery boy, before he can deliver such narcotic to the patient) and Class B narcotics (oral narcotics may be prescribed either by a signed prescription order, or orally, such as phoning by the physician). While just a few physicians are telephoning Class A narcotics, a majority of the physicians delegate to an office girl the telephoning of Class B narcotics. Either is illegal. The cooperation of both the physician and pharmacist to climinate such illegal practices is sought.

PODIATRY — Considerable discussion ensued relating to Chapter 64 (Senate Bill No. 155) enacted by the 27th Legislature of the State of Arizona, Second Regular Session, dealing with Insurance; providing that benefits for certain medical or surgical services performed by licensed Podiatrists shall not be excluded from hospital and medical service corporation contracts, disability insurance contracts and group disability insurance contracts. This measure was of major concern to Arizona Blue Shield, who opposed its enactment.

It was regularly moved and unanimously carried that this Committee take the position that the Podiatrists should be excluded from hospitals; that any work that is needed for hospitalization should be done by an MD, Orthopedic Surgeon, General Surgeon or whoever is capable of doing it; that so far as this Committee is concerned, the Podiatrists should be limited to working in the office, not in hospitals; and it so recommends to the Board of Directors.

Disaster Medicine

CHAIRMAN — Earl J. Baker, M.D., designated Chairman.

In the absence of Dr. Baker, there is no report.

U.S. CIVIL DEFENSE COUNCIL — The Joint Maricopa County Civil Defense and Disaster Organization invites this Association to join, as an Associate Member, the United States Civil Defense Council. The yearly membership fee is $10.00. Authorized, designating Dr. Baker as representative.

IMMUNIZATION SYMPOSIUM — The AMA Symposium on Immunizations to be convened by the AMA Council on Environmental and Public Health will be held in Atlanta, Georgia, Monday, October 17, 1966. A representative of this Association is invited to attend. The Symposium will be co-sponsored by the Communicable Disease Center, Public Health Service, U.S. Department of Health, Education and Welfare. Dr. Baker expressed a desire to attend.

It was regularly moved and unanimously carried that, in view of the condition of our budget, we regret that this request must be denied.

DISASTER MEDICAL CARE — Carl W. Waldron, M.D., of Scottsdale, Coordinator of the Disaster Medical Care Program, who joined this Committee at luncheon, immediately following presented a resume of his activities during the past several years. The development of the so-called "packaged disaster hospital" and distribution thereof in Arizona was outlined. It was stated that Maricopa County Medical Society has an excellent Disaster Medical Care Committee under the leadership of William J. LaJoie, M.D. In Maricopa County some 216 doctors have agreed to leave Phoenix for one week, if needed, to go anywhere disaster strikes. A similar project is being developed for nurses. Future activity of this operation will depend upon budget appropriations. REPORT RECEIVED.

Industrial Health

CHAIRMAN — Ray Fife, M.D., designated Chairman.

Walter V. Edwards, M.D., a member of this Subcommittee, is representing Dr. Fife at this meeting.

OCCUPATIONAL HEALTH ACTIVITIES — Dr. Payne reported that he had turned over to Dr. Fife a report distributed by AMA setting forth activities of Occupational Health Committees throughout the country. It is indicated no action is necessary at this time.

OCCUPATIONAL DISEASES & DISABILITY — During the Second Regular Session of the 27th Legislature of the State of Arizona there was introduced in the House H.B. 201 and H.B. 219, each relating to occupational diseases and disability. They failed of enactment. The Industrial Relations Committee of this Association, reviewing the content of these two measures, advised that in general it felt that the changes in the law seemed to be appropriate, and they did not have any serious disagreement with the recommendations for the changes; further, that the Occupational Disease and Disability

section of the Industrial Law should have an addition to it so that, instead of listing coverage to only the specific toxic agents listed, an additional category should be added that any other agents which can be medically proven to be a causative agent for occupational disease should also be accepted. To limit it just to the elements based in the law does not accept the possibility of new chemicals arising in the future that might cause an occupational disease.

Dr. Edwards briefly reviewed the two measures referred to and then outlined in some detail the many problems arising in the administration of both the Workman's Compensation and Occupational Disease laws. It was his expressed feeling that this Association should recognize the need for amendments to both these statutes and assume some leadership in developing legislation which will broaden the scope of benefits for claimants with valid medical problems related to employment and limit the acceptance of benefits for medical conditions not caused by employment. It was pointed out that compensation can hardly be terminated unless a physician gives a date of discharge with no permanent disability. Question of responsibility and costs was discussed.

It was regularly moved and unanimously carried that the Professional Committee recommend to the Board of Directors that they consider instructing the Industrial relations Committee to explore the impact of the present Workman's Compensation and Occupational Disease laws and their interpretation by the Courts, and the administration of these laws by the Industrial Commission at the present time on the medical care of the industrially sick and injured.

Medical Education

CHAIRMAN — Dermont W. Melick, M.D., designated Chairman.

MEDICAL TELEVISION BROADCASTERS — Approved statement of expenditures totalling $150.32 submitted by Boyden L. Crouch, M.D., covering expenses associate with atendance at a meeting of the Medical Television Broadcasters held in Salt Lake City, Utah, March 25 and 26, 1966. This included a membership fee of $50.00 in the Association of Medical Television Broadcasters.

ROCKY MOUNTAIN EDUCATIONAL STUDY — The Arizona State Department of Public Instruction, by memorandum dated February 4, 1966, reports entering into an agreement with eight states (Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah and Wyoming) comprising the Rocky Mountain area, to cooperate in a study concerned ultimately with improving and strengthening the respective state agencies responsible for education. The project is financed primarily by funds provided under the Elementary and Secondary Education Act of 1965. Three major workconferences in the area will be held prior to June 30, 1967. They will be concerned with (1) prospective changes in society between now and 1980; (2) the implications of these changes for education; and (3) planning and change processes with particular reference to education. RECEIVED.

MEDICAL EDUCATION TELEVISION — Dr. Melick reported that the scientific program developed to supply speakers for County Medical Societies has not been too burdensome, but it has been a burden to obtain speakers. The program will be continued.

The Medical Education Television Program, under the sub-chairmanship of Dr. Crouch, has progressed satisfactorily. The Board of Directors has allocated a sum of $2,500.00 for this purpose. Commencing September next, Station KUET of Tucson (time to be determined) and Station KAET of Tempe (Wednesday evenings at 10:30 p.m.) will commence broadcasting medical educational programs. The thought was advanced that their publication should be commenced through the medium of ARIZONA MEDICINE.

In the field of heart disease, cancer and stroke, it is believed this activity will be centered ultimately through the Medical School of the University of Arizona in Tucson. Ultimately, it may not be necessary for Association participation.

Dean Merlin K. DuVal, Jr., M.D., of the University of Arizona School of Medicine anticipates admitting thirty-two students in September, 1967, the first freshman year.

Medicine and Religion

CHAIRMAN — Albert G. Wagner, M.D., designated Chairman.

Dr. Payne reported that Derald G. May, M.D., Chairman of the Subcommittee on Mental Health, has agreed to serve as a member of this Subcommittee, and Dr. Wagner will serve on Dr. May's Subcommittee as nonpsychiatrist member to establish liaison between the two activities.

Dr. Wagner reported that the membership composite of his Subcommittee is incomplete at this time. Martin List, M.D., (Phoenix) has agreed to serve as assistant chairman and, of course, Derald G. May, M.D., (Phoenix) representing the psychiatrists has agreed to serve. Further appointments, aimed at geographic regional representation, will be completed by August fifteen.

ACTIVITY — Meetings with Bob Etheridge, AMA Department of Medicine and Religion, were held March fifteenth and April twenty-sixth. Discussions considered possible programs for 1966 and 1967 and methods for developing the work of the Subcommittee.

During the ArMA Annual Meeting, beginning April twenty-sixth, a booth was set up and manned by the Chairman for distribution of brochures and answering questions. Many doctors stopped by, and eighteen doctors signed cards expressing willingness to work with the Subcommittee. The film, "The One Who Heals," was shown and moderated by the Chairman.

At a May meeting of the Ministers-Doctors Society of Phoenix, to which the wives were invited, wives of a minister and a doctor discussed the privileges and problems of their positions in life. Bob Etheridge spoke briefly on the work of his AMA Department nationally.

PLANS — Plans for 1966-67 include (1) at least three regional meetings to be held with doctors who have expressed interest to stimulate the development of local programs on Religion and Health; (2) appointment of County Committee Chairmen by County Medical Society Presidents, at least in the larger counties, will be requested; and (3) under the sponsorship of ArMA and the University of Arizona School of Medicine, a seminar on Medicine and Religion is being considered for one day after the Medical School has opened. Contact has

been made with Dean DuVal, who favors such a program and has promised assistance in arrangements.

Mental Health

CHAIRMAN — Derald G. May., M.D., designated Chairman. Since Dr. May is not present, there is no report.

MENTAL HEALTH WORKSHOP — In February last, the Sixth Regional Workshop on Mental Health, sponsored by the American Academy of General Practice in cooperation with the American Psychiatric Association was held in Las Vegas, Nevada. Among actions taken was one: "That the group go on record as recommending that the Arizona Medical Association establish an ad hoc committee to work with the Arizona Academy of General Practice, the Arizona Psychiatric Society and such other medical organizations as it considers suitable to form a steering committee to coordinate continuing phychiatric education programs for practicing physicians in Arizona." Both the AAGP and the APS offered support. The report contained some fifteen suggestions as a guide to the state steering committee. It is the consensus that such activity falls within the scope of operation of the Subcommittee on Mental Health; accordingly, the matter was referred to it for study and report.

MENTAL RETARDATION CENTERS — The National Association of State Mental Health Program Directors reports 45 State Mental Retardation Construction Plans approved and 37 Projects approved for funding (FY 1965 and 1966). Of the latter, two projects are included located in Phoenix, Arizona—Valley of the Sun School: $56,115.00; and Arizona Preschool for Retarded Children: $60,000.00. RECEIVED.

Public Health

CHAIRMAN — Ben P. Frissell, M.D., designated Chairman.

The membership of the Subcommittee organization will remain the same.

HEALTH & MEDICAL RECORD FORM — Determined to take no action with regard to the approval or disapproval of the Unified Personal Health and Medical Record form submitted by M. J. Sharp, M.D., of Idaho, associate with the recording of examinations given to members of the Boy Scouts, Girl Scouts, church and other youth groups prior to participation in these organizational physical activities.

INFANT MORTALITY — The Committee on Maternal and Child Care of the AMA extends an invitation to individuals and groups concerned with the problems of infant mortality to attend the National Conference on Infant Mortality Problems to be held in San Francisco, August 12 and 13, 1966. Approved the expenditure of $300.00 requested by Dr. Hermann S. Rhu, Jr., Chairman of the Subcommittee on Perinatal and Maternal Mortality of the Subcommittee on Public Health.

COMMUNITY HEALTH WEEK — The Board of Trustees of AMA has officially designated the week of October 16 through 22, 1966, as Community Health Week and established the corresponding week for the observance of Community Health Week in future years. TABLED.

ENVIRONMENTAL HEALTH MANAGEMENT — AMA calls attention to the National Congress on Environimental Health Management being planned by it for April 24 through 26, 1967, in New York City. This is the first national congress in this field to deal comprehensively with the management of the environment from the point of view of Medicine. It is pointed out from the records that almost all of the state medical societies now have committees concerned with some aspect of environmental health, such as air and water pollution, automotive safety, pesticides, and radiological and other environmental hazards. This Association is invited to plan now on sending one or more official representatives to the Congress. Action deferred pending availability of budgetary funds in 1967.

COMPREHENSIVE HEALTH PLANNING — Referred by the Federal Services Committee is a report dealing with S. 3008 and companion bill, H.R. 13197, (each of the 89th Congress) to promote and assist in the extension and improvement of comprehensive health planning and public health service and to provide for a more effective use of available federal funds for such planning and service. It is the consensus of that Committee that such activity falls within the province of the Professional Committee. The Federal Services Committee recommended to the Board of Directors its support of S. 3008. It has been ascertained that the Legislative Activities Committee of AMA has this measure under study; however, to date, it has not taken an official position relative thereto.

Dr. Spendlove reviewed the matter, advising that he understands it is desirable to do away with specific grants on cancer, chronic illness, aging, dental health, mental health, heart disease, home health services, community mental health, radiological and tuberculosis services. This would be good, allowing them to spend money where it is necessary; however, there is very recent indication that it is intended to increase the appropriation tremendously, the states to match the respective fund allocation. In Arizona, this may well require a matching fund approximating $5,000,000.00.

It was regularly moved and unanimously carried that no action be taken at this time with regard to this legislation; and that the Board of Directors be so informed.

Safety

CHAIRMAN — MacDonald Wood, M.D., designated Chairman.

While Dr. Wood has agreed again to serve as Chairman of this Subcommittee, in his absence, there is no report. He has indicated that he would like to appoint Howard H. Johnston, M.D., (Phoenix) as Co-Chairman of his Subcommittee. It is his responsibility to select and appoint members of his Subcommittee among those doctors of medicine interested and willing to serve.

Dr. Wood currently is a member of the Board of Directors of the Arizona Safety Council.

MEDICAL ASPECTS OF TRAFFIC ACCIDENTS — Phil T. White, M.D., (Phoenix) chairman of a committee formed by the Maricopa County Safety Council and the Arizona Safety Foundation, seeks the assistance of this Association in helping combat the problem of traffic accidents. The object of the committee referred to is designed to deal with the medical aspects of traffic accidents. A Medical Advisory Board to the Drivers'

License Division is considered desirable. Referred to the Subcommittee for review and report.

HIGHWAY HOSPITAL SIGNS — For information, AMA advises of the adoption, as amended, at its Clinical Session in November, 1965, of a resolution encouraging constituent state associations and component county societies to participate in public hearings for the purpose of assisting in the development of appropriate standards which would assure uniform signs on our limited access highways and interstate systems indicating the location of the nearest licensed hospital. RECEIVED.

Athletic Medicine

CHAIRMAN — It was determined to activate a Subcommittee on Athletic Medicine. Richard L. Dexter, M.D., designated Chairman. Dr. Dexter is requested to appoint the members of his Subcommittee.

PHYSICAL EXAMINATION — Bernard W. Simons, Jr., M.D., Chairman, Sports Medicine Committee, Pima County Medical Society, reports violations from both the athletic staffs and physicians handling injuries. It is the feeling that stress should be laid upon this at the state level, and the importance of a good, pre-season physical examination could be the theme of a broad publicity program. Attention is directed to the Arizona Interscholastic Association's health examination and history form. It is the feeling of the Sports Medicine Committee in this area (Tucson) that the physician's side is inadequate, expressing dissatisfaction, both with the number of things to be filled out plus the ignoring of what it feels would be important information. This Committee's feelings in this regard is sought.

Determined to refer this matter to this Subcommittee for review and report.

Woman's Auxiliary

CHAIRMAN — W. Shaw McDaniel, M.D., designated Chairman.

Dr. McDaniel reported that his constituents had not approached him with any problems.

COMMUNICATIONS

Ethics — Publication of Medical Advances

Ray Fife, M.D., President, Maricopa County Medical Society, under date of May 12, 1966, forwarded a telegram to F. J. L. Blasingame, M.D., Executive Vice President of the AMA, stating: "The Board of Directors of the Maricopa County Medical Society is deeply concerned over recent nation-wide news stories concerning medical advances of undetermined merit by members of the profession. On page 62 of the 1966 Judicial Opinions and Reports, it states: 'When any sore of medical information is released to the public, the promise of radical cures or of extraordinary skill or success is unethical.' We feel that steps should be taken by the AMA to publicize in the AMA News and other media the importance of strict adherence to the Code of Ethics ruling on pubilicty. Unless such abuses are curbed, the profession will understandably assume that adherence to the Code of Ethics is no longer necessary."

At a meeting of the Board of Directors of this Association held July 10, 1966, consideration was given to this telegram. It was determined to refer the matter to the Professional Committee for review and recommendation.

It was the consensus that this type of publicity is just not ethical, not in the interest of either the patient or the physician. It is the recommendation to the Board of Directors that a similar statement be forwarded.

OTHER BUSINESS

Utilization of Retired Physicians

Determined to refer to the Board of Directors the recommendation of this Professional Committee that some means be found, possibly through a By-Laws amendment, to utilize the talents of retired physicians now residing in this state. Possibly, they could be given some type of membership classification not requiring licensure. They could be appointed representatives of this Association to various community boards and councils, thus keeping it better informed. They might welcome the opportunity to serve in such activity. Possibly, a survey could be undertaken to locate them and determine their interest.

Future Meetings

Considerable discussion ensued with regard to scheduling of future meetings. It appears desirable to eliminate, if possible, day-long sessions. Obviously, Sundays continue to be the more favorable.

The Chairman proposed that, with the mailing of the Minute to each Subcommittee Chairman, a duplicate copy of the respective section of interest will accompany it. This duplicate copy will be reviewed by the Subcommittee Chairman to assure satisfaction of accuracy, but more particularly, to alert him to the subject referrals requiring the attention of his Subcommittee and report. He will sign this duplicate copy, acknowledging its receipt, and mail it to the Central Office. In due course, and as early as possible following investigation and/or deliberation, the Subcommittee Chairman will submit in writing to the Central Office his report on the subject or subjects. This will make it possible for the Chairman to review the report in advance of the next meeting and determine its length through preparation of the agenda. If it is considered feasible to convene a meeting at 1:00 p.m. and conclude the session by 5:00 or 5:30 p.m., this will be done. AGREED.

MEETING ADJOURNED AT 4:05 P.M.

Charles E. Henderson, M.D.
Secretary

24-HOUR AMBULANCE SERVICE



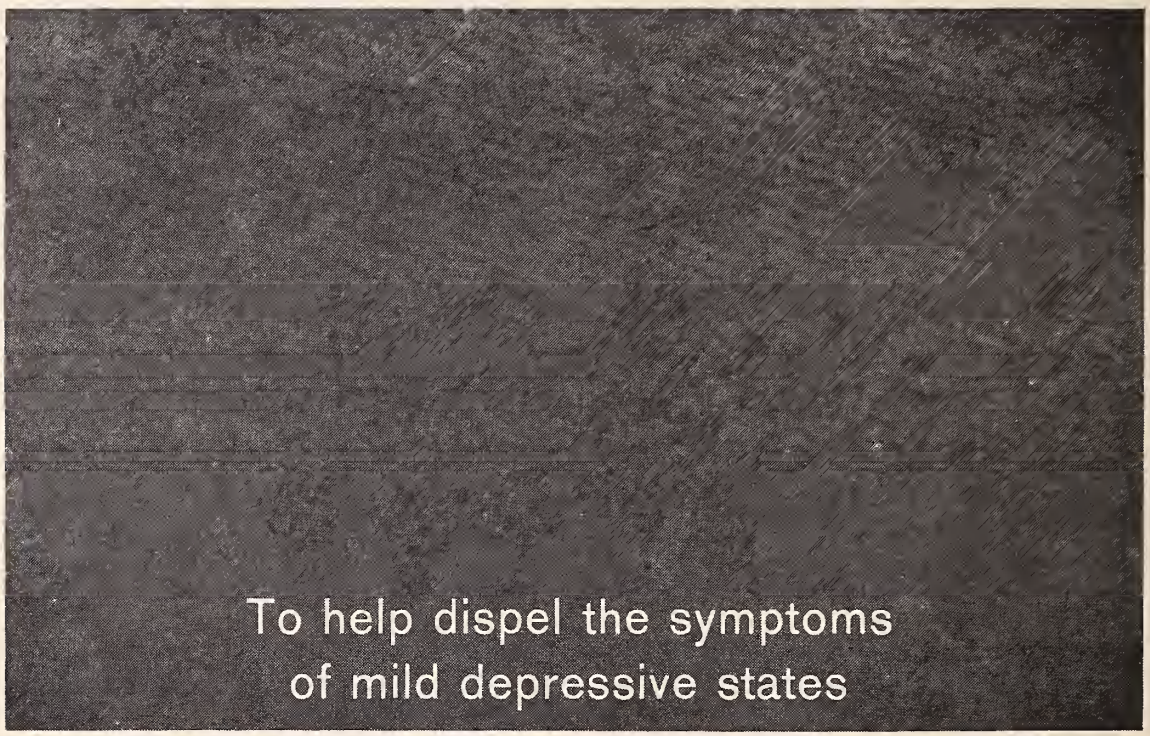
MOTOR AND AIR

A. L. MOORE & SONS

Mortuary and Ambulance Service

Adams at Fourth Ave., Phoenix

AL 2-3411



CONSIDER **DEXAMYL**® FIRST

brand of dextroamphetamine sulfate and amobarbital

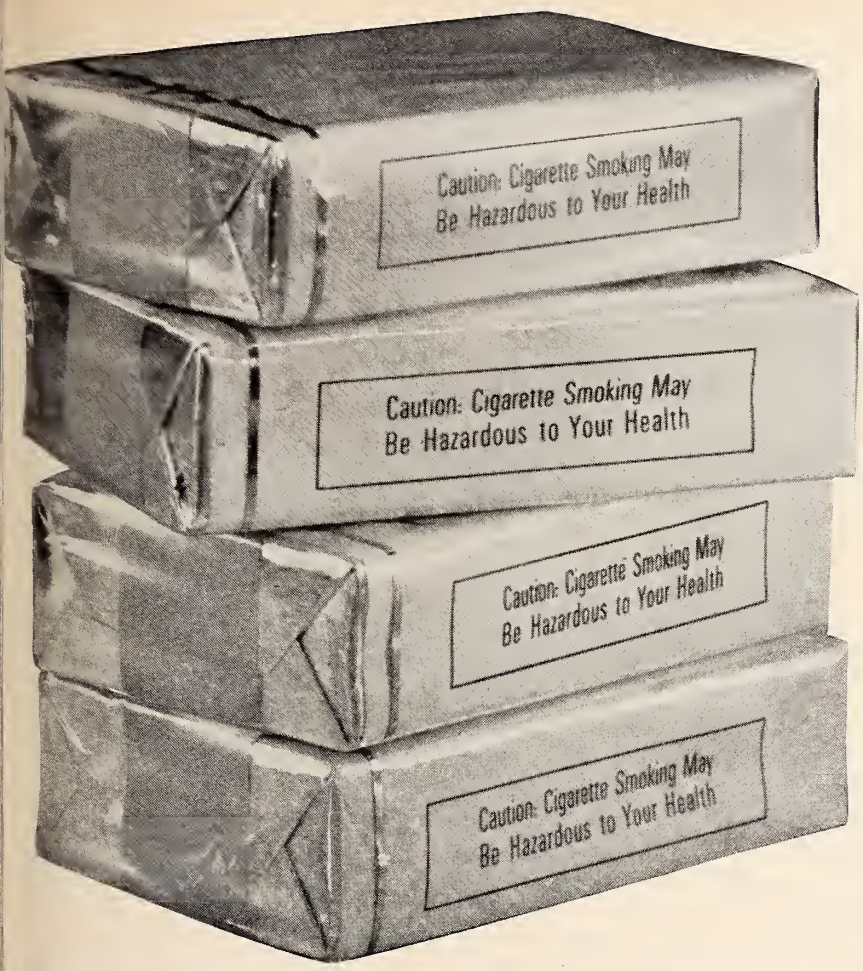
Often within the hour, 'Dexamyl' works to help dispel such symptoms as apathy, pessimism, loss of interest and initiative, and lack of ability to concentrate.

Formulas: Each 'Dexamyl' Spansule® capsule (brand of sustained release capsule) No. 1 contains 10 mg. of Dexedrine® (brand of dextroamphetamine sulfate) and 1 gr. of amobarbital, derivative of barbituric acid [Warning, may be habit forming]. Each 'Dexamyl' *Spansule* capsule No. 2 contains 15 mg. of Dexedrine (brand of dextroamphetamine sulfate) and 1½ gr. of amobarbital [Warning, may be habit forming].

The following is a brief precautionary statement. Before prescribing, the physician should be familiar with the complete prescribing information in SK&F literature or *PDR*.

Precautions: Use with caution in patients hypersensitive to sympathomimetics or barbiturates and in coronary or cardiovascular disease or severe hypertension. Do not use in patients taking MAO inhibitors. Excessive use of the amphetamines by unstable individuals may result in a psychological dependence; in these instances, withdraw the medication. Use cautiously in pregnant patients, especially in the first trimester. *Side effects:* Insomnia, excitability and increased motor activity are infrequent and ordinarily mild.

SK&F SMITH KLINE & FRENCH LABORATORIES



the tar trapped in
Tar Gard* in one year ...



exceeds the weight
of four packs of cigarettes

Use this statistic to help convince your patients to stop smoking.

Presentation of a familiar point of reference giving some indication of the amount of tar in cigarette smoke could help influence your cigarette smoking patients to quit.

Let Tar Gard help. In an independent study by Curtis and Tompkins, Analytical Chemists, San Francisco, it was estimated that over a 365 day period, using twenty filter cigarettes a day as a base, the average amount of tar trapped in the unique* Tar Gard filter holder was 0.29 lb., more than the weight of four packs of cigarettes.** Use this statistic to give your patients a more concrete grasp of the amount of tar in cigarette smoke.

Support with visual demonstration. Combine reference to this statistic with a visual demonstration in your office. Show tar actually being isolated from cigarette smoke.

All you have to do is have a patient smoke four cigarettes through the Tar Gard Demonstration Unit. When he sees the amount of tar trapped in the transparent mouthpiece chamber and realizes that normally this would stay in the mainstream of the smoke – the smoke he inhales – this, related to the number of cigarettes he has smoked over a 365 day period could prove to be the most dramatic visual proof of the health hazards of smoking you could show him... enough to force him to draw his own conclusions as to whether the smoking habit is worth the price he might have to pay... enough to convince him to quit.

Complete and mail coupon for your free Tar Gard Demonstration Unit.

*Technically, Tar Gard is not a filter. It is a patented tar trapping device based on the principle of the Venturi tube, such as is employed in the bedside respirator used in critical respiratory management, the vaporizer and the aspirator. In Tar Gard, as cigarette smoke is drawn into the mouthpiece, the pressure energy of the tar-filled smoke is accelerated (to approximately 200 mph) and then stopped abruptly by an impingement barrier, where tars are trapped.

**36 sealed packs of a leading filter cigarette were weighed and divided by 9 to give an average four pack weight of .23 lb.

Tar Gard Company, 2 Pine Street, San Francisco, Calif. 94111

☐ Please send me free professional Tar Gard demonstration unit.

☐ Please send me_____doz. regular Tar Gard retail units at special professional price of $10.00 per ½ doz.; minimum order. ($1.67 each – usually retails at $2.95.)

☐ Check enclosed. ☐ Please bill me.

Name _____

Type of Practice _____

Address _____

City _____ State _____ Zip _____

TAR GARD®

AM 4

"A DRAMATIC INCREASE IN SALMONELLOSIS HAS BEEN OBSERVE

SALMONELLA CARRIERS "PRESENT A FORMIDABLE FIFTH COLUMN."[2]

Furoxone exerts "outstanding activity against Salmonella sp."[3] and "has enhanced the physicians' armamentarium in that it now affords a relatively effective, safe bactericidal agent, which may be used to treat the active disease as well as the carrier state".[2]

SALMONELLA SPECIFIC FUROXONE®

FURAZOLIDONE LIQUID/TABLETS

Often succeeds where others fail in a wide variety of bacterial diarrheas. Specifically within the broad bactericidal range of Furoxone:

Salmonella paratyphi	Salmonella montevideo
Salmonella schottmülleri	Salmonella newport
Salmonella typhimurium	Salmonella anatum
Salmonella choleraesuis	Salmonella derby
Salmonella enteritidis	

Proper antibacterial therapy for individual cases should help in reducing the total number of cases in an epidemic situation.

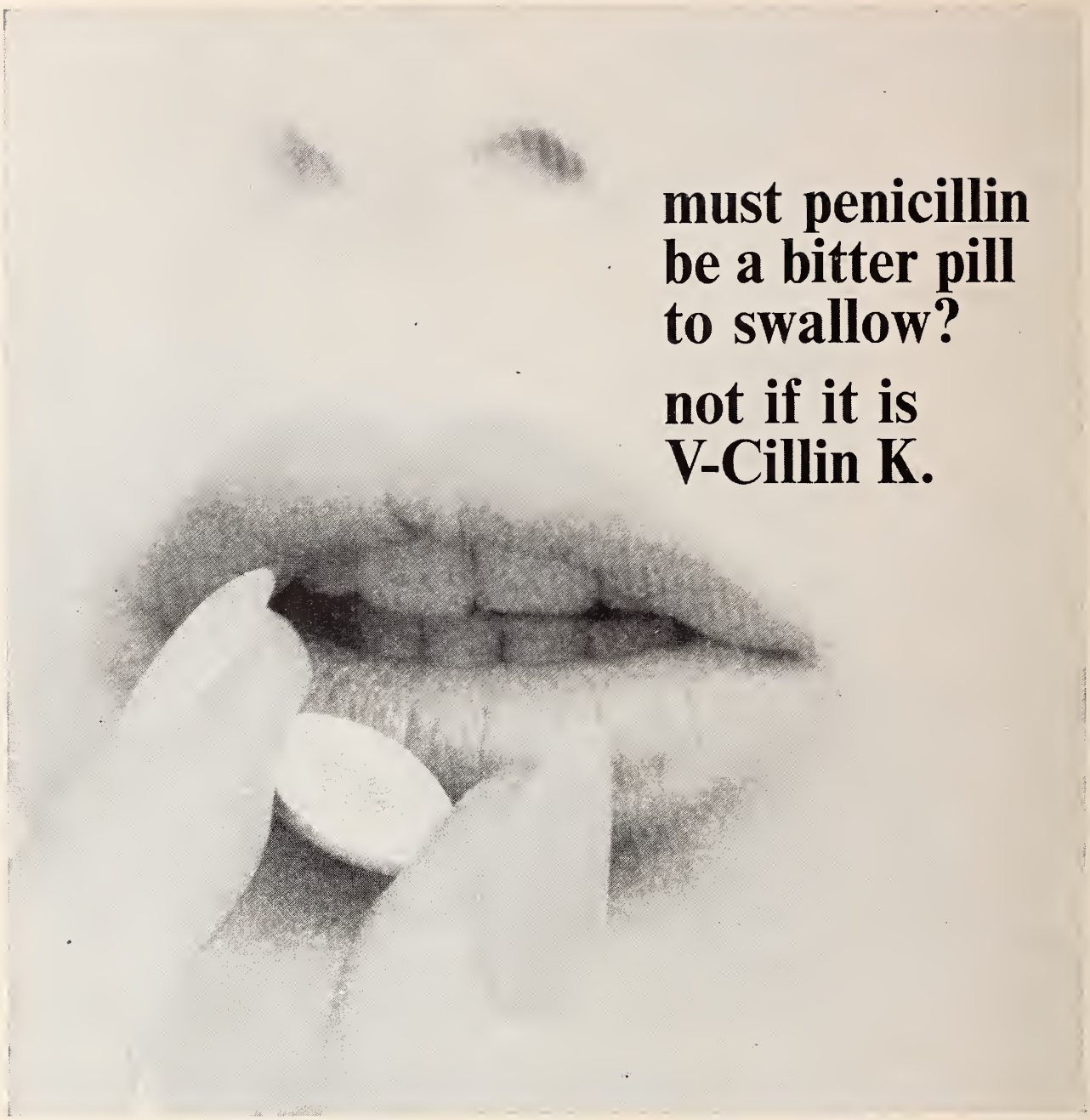
Side effects are infrequent. A few hypersensitivity reactions to Furoxone have been reported including a fall in blood pressure, urticaria, fever, arthralgia and a vesicular or morbilliform rash. These reactions subsided promptly following withdrawal of the drug. Primaquine-sensitive patients may develop a mild reversible hemolytic anemia. Nausea, emesis, headache or malaise may occur occasionally. To obviate alcohol-disulfiram type reactions, advise against use of alcohol-containing drugs during therapy and four days thereafter.

Do not give to infants under one month of age.

Composition: Furoxone Liquid contains, per 15 cc. tablespoonful, furazolidone 50 mg., pectin 225 mg., and kaolin 3.0 Gm. Furoxone Tablets each contain 100 mg. of furazolidone.

References: 1. Editorial: J.A.M.A. *189*:691 (Aug. 31) 1964. 2. Foertsch, J. H.: J. Oklahoma Med. Assn. *57*:449 (Oct.) 1964. 3. Paul, H. E., and Paul, M. F.: The Nitrofurans—Chemotherapeutic Properties, in Schnitzer, R. J., and Hawking, F. (Eds.) Experimental Chemotherapy, Vol. 2, New York, Academic Press, 1964.

Originators and Developers of The Nitrofurans
EATON LABORATORIES
Division of The Norwich Pharmacal Company
NORWICH, NEW YORK



V-Cillin K now has a unique glossy coating that banishes bitter penicillin taste and makes it easier to swallow. Within six seconds (just long enough for the tablet to get past the taste buds), the coating dissolves and the penicillin is ready for immediate absorption into the bloodstream. The patient still gets all the special benefits of V-Cillin K, including consistent dependability . . . even in the presence of food.

Indications: V-Cillin K is an antibiotic useful in the treatment of streptococcus, pneumococcus, and gonococcus infections and infections caused by sensitive strains of staphylococci.

Contraindications and Precautions: Although sensitivity reactions are much less common after oral than after parenteral administration, V-Cillin K should not be administered to patients with a history of allergy to penicillin. As with any antibiotic, observation for overgrowth of nonsusceptible organisms during treatment is important.

Usual Dosage Range: 125 mg. (200,000 units) three times a day to 250 mg. every four hours.

Supplied: Tablets V-Cillin K, 125 or 250 mg., and V-Cillin K, Pediatric, 125 mg. per 5-cc. teaspoonful, in 40, 80, and 150-cc.-size packages.

V-Cillin K® **Six-Second Barrier to Bitterness**

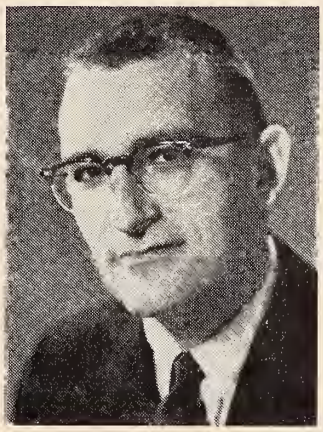
Potassium Phenoxymethyl Penicillin

601098

Additional information available to physicians upon request. Eli Lilly and Company, Indianapolis, Indiana 46206.

Lilly

PITFALLS OF THYROID FUNCTION TESTS



Sheldon S. Waldstein, M.D.

With recent advances in treating hormonal disorders and modern advances in diagnostic procedures, errors are frequent in the interpretation of thyroid tests. These pitfalls are discussed here.

DISEASES of the thyroid gland are commonly encountered in clinical practice, and the simplicity and accuracy of modern thyroid tests has greatly enhanced their recognition and diagnosis. All commonly used thyroid tests, if properly performed, supply information useful for the evaluation of the patient and when results are correlated fully with the clinical findings, an accurate diagnosis can be established readily. Yet, these tests, like all procedures, are subject to error and misinterpretation, and the physician who accepts their results uncritically may be led badly astray. A careful clinical evaluation remains the foundation for diagnosis of thyroid disease. Proper selection of the appropriate test or tests to establish the site and extent of thyroid abnormality depends upon the clinical findings. No single test solves all diagnostic problems in thyroid disease. No single test is remarkably superior to all others. No single test is devoid of error. All tests have inherent limitations and specific applications. An understanding of their physiology is intrinsic to their proper use. Therefore, I should like to begin this review of the pitfalls to avoid with a discussion of the principles of normal thyroid physiology and the rationale behind the tests commonly used for clinical purposes.

The normal pituitary-thyroid axis is a typical negative feedback, homeostatic system. The anterior pituitary elaborates thyroid stimulating hormone (TSH, thyrotropin) which stimulates thyroid growth, hormone synthesis and hormone secretion. Thyroid hormone, secreted by the thyroid gland under the influence of TSH, exerts its peripheral metabolic effects and, in turn, regulates pituitary TSH secretion. If thyroid hormone concentration falls below equilibrium levels, the pituitary releases more TSH. If thyroid hormone concentration rises above equilibrium levels, TSH release is inhibited partially or completely. Thus, there are high levels of circulating TSH in primary myxedema, and very low or undetectable TSH levels in hyperthyroidism. Having variations in TSH release dependent

Director, Division of Medicine and Chief of Endocrinology, Cook County Hospital; Professor of Medicine, Northwestern University Medical School, Chicago, Illinois.
From the Hektoen Institute for Medical Research.
Presented at the 75th Annual Meeting of the Arizona Medical Association, April 1966.

upon thyroid hormone concentration serves normally to maintain a steady circulating level of thyroid hormone. Recent evidence indicates that a TSH releasing factor from the hypothalamus may also participate in the system, but aparently not to the same extent that corticotropin releasing factor affects ACTH secretion.

The thyroid uniquely utilizes iodine in the manufacture of its hormones. Using radioactive isotopes of iodine, particularly iodine^{131}, great strides have been made in working out the details of iodine, and thereby thyroid metabolism. Iodine, ingested in any form in the food and water, is absorbed from the gastrointestinal tract and enters the extracellular fluid as iodide ion. The daily requirement for iodine is normally about 200-250μg, of which ⅓ is accumulated by the thyroid and ⅔ is excreted by the kidney. Although the gastric and salivary glands also take up iodide, this is secreted back into the gastrointestinal tract and does not affect over-all iodine balance.

Iodide accumulation or "trapping" by the follicular cells of the thyroid is stimulated by TSH. When there is excess TSH, iodide uptake is increased above normal; when there is TSH deficiency, uptake is reduced below normal. In addition, the concentration of iodide ion in the plasma also influences its accumulation, for when plasma iodide is elevated above the normal level of 0.5μg%, trapping is inhibited and when plasma iodide is much reduced, trapping is enhanced. Certain inorganic radicals, such as perchlorate or thiocyanate, impair trapping and can therefore be used as antithyroid drugs.

After being concentrated within the follicle, iodide is incorporated into the thyroid hormones through a number of biochemical steps. Thyroidal iodide, as the free ion which has been trapped but not yet incorporated into hormone is referred to as "inorganic iodine." Thyroidal iodine which is already incorporated into hormone or hormone precursors is referred to as "organic iodine." The conversion of inorganic iodine to organic iodine ordinarily proceeds rapidly and completely within the colloid. A number of substances, including propylthiouracil, methimazole, sulfa drugs, and goitrogens in certain foods, block the conversion of inorganic to organic iodine, and thus prevent hormone synthesis even though they do not prevent iodide trapping.

The active thyroid hormones, triiodothyronine (T_3) and tetraiodothyronine (T_4, thyroxin) are synthesized on tyrosyl portions of intact thyroglobulin, the protein of the colloid. Release of hormone is stimulated by TSH, which activates a protease that splits the T_3 and T_4 moieties off thyroglobulin. Iodine appears to influence this step, also, for high plasma iodide levels inhibit hormone release.

About 95% of the circulating thyroid hormone is thyroxin and 5%, triiodothyronine. Some circulating T_3 originates in the thyroid, but some is derived from the deiodination of thyroxin by peripheral tissues. Thyroxin is transported in the blood tightly bound to specific plasma proteins known as thyroxin-binding-globulin (TBG) and thyroxin-binding pre-albumin (TBPA). A very small amount of thyroxin, depending upon the dissociation equilibrium, is unbound. It is believed that it is the free thyroxin which is responsible for all the metabolic activity of the hormone and that the protein-bound thyroxin serves as a reservoir for free thyroxin. Triiodothyronine, by contrast, is bound poorly by plasma proteins. This may largely account for its very rapid action in comparison to thyroxin.

The exact mode of action of the thyroid hormones at the cell level is not known. Thyroid hormones increase oxygen consumption, augment the actions of epinephrine and norepinephrine, and have important effects on growth and the metabolism of lipids and proteins. They are metabolized in the liver and other tissues and are inactivated by conjugation, deiodination, deamination, and decarboxylation. The iodide released by deiodination re-enters the iodine cycle.

A number of tests are readily available in most hospitals for assessing thyroid function and the function of the pituitary-thyroid axis (Fig. 1). The term "thyroid *function* test" is perhaps best restricted to those tests which measure directly thyroidal trapping, hormone synthesis or hormone release. The remainder measure thyroid function only indirectly and should be referred to by a less specific term, such as "thyroid test."

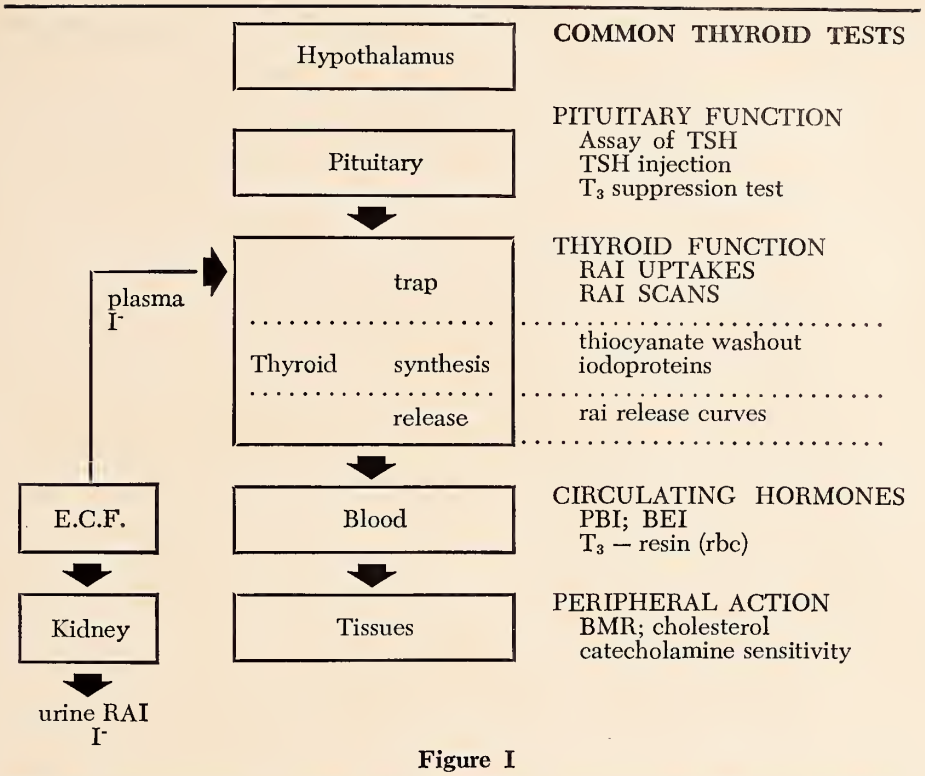


Figure I

Measurement of thyroid uptake of a tracer dose of radioactive iodine is a direct measure of its iodide trapping function. Iodine-131 is the most commonly used tracer and the uptake is conventionally measured 24 hours after the tracer has been administered. But a variety of modified uptake tests are used for special needs. These include the radioiodine uptake at 10 minutes, 1 hour, 2 hours, 6 hours, or other intervals up to 48 hours; the indirect estimation of trapping from the urinary excretion of tracer during the first 24-72 hours after its administration; and the measurement of uptake when the trap mechanism is challenged with stable iodide or thiocyanate. When one wishes to know whether different portions of the thyroid are trapping at different rates, or whether ectopic tissue is accumulating iodine, differential counting or scanning is used. It is also possible to assess whether over-all hormone synthesis is intact, and whether hormone release is normal by relatively simple modifications of the uptake procedure. For the usual clinical situation, the 24-hour radioiodine uptake is the standard test of thyroid function. It is simple, reliable, reproducible, and results compare well between laboratories.

A second parameter useful to measure is the concentration of circulating thyroid hormone. The serum protein-bound iodine (PBI) supplies this estimate in a reasonably direct fashion. The in vitro uptake of I^{131}-labelled triiodothyronine by erythrocytes or an ion-exchange resin also serves as a useful, if more indirect, estimate of blood hormone concentration. It should be understood that the level of hormone found in the blood by these or more precise tests is assumed to originate in the thyroid and therefore reflect thyroid hormone release. Should the hormone be of exogenous or ectopic origin, this assumption may be quite misleading.

Thyroid hormones exert their effects upon all tissues of the body. The BMR and the serum cholesterol concentration are commonly employed to gauge this peripheral action, as a reflection of thyroid activity. What is being tested, however, is quite remote from the thyroid itself and influenced by many factors besides the thyroid. These tests therefore must be interpreted with much caution.

A final site to be considered when studying the thyroid is the pituitary. Measurement of blood TSH by bio- or immunoassay is not yet practical for routine use, so indirect tests must be used. The effect of an injection of TSH upon the radioiodine uptake indicates whether the thyroid is capable of responding to its physiologic stimulus. Whether or not the administration of triiodothyronine suppresses radioiodine uptake, as it does normally due to inhibition of TSH, indicates whether or not the thyroid is under the physiologic control of the pituitary.

Thus, in assessing the patient with possible

thyroid disease, several sites – the thyroid itself, the blood, the peripheral tissues, and the pituitary – may have to be evaluated before the diagnosis is complete. Ordinarily, this can be accomplished simply by determination of the 24-hour radioiodine uptake, the PBI (or the T_3 red cell uptake) and the BMR. This simple thyroid profile is supplemented when appropriate by injection of TSH to stimulate the thyroid, or by suppression of pituitary TSH by administration of triiodothyronine. Only in unusual circumstances will resort to additional or more sophisticated tests be necessary for clinical purposes.

In Table I are shown the results to be expected when using this thyroid profile in the disorders most commonly encountered in practice. The ranges of normal found in our laboratory are shown on the top line. We use the T_3-resin uptake; values for the T_3 test using erythrocytes are reported to be lower in some laboratories. In non-toxic goiter, endocrine function of the thyroid is intact, so that trapping, circulating hormone levels, and metabolic rates are normal. In nodular goiter, the radioiodine scan of the gland may show the presence of non-functioning nodules ("cold" nodules), or nodules whose function does not differ from the rest of the gland ("lukewarm" nodules), or nodules which accumulate iodine more avidly than the rest of the gland ("hot" nodules). Occasionally, a "hot" thyroid adenoma may "blank out" the remainder of the gland, the scan showing a solitary, functioning nodule but no other thyroid tissue. Such a scan indicates that an autonomous adenoma is present. It secretes thyroxin independent of the pituitary. The thyroxin shuts off TSH secretion, and the remainder of the gland, being sensitive to TSH levels, shuts down, too. After destruction of the adenoma by radioiodine therapy, the scan will show the nodule to be absent and the remainder of the gland to have resumed uniform function.

Primary hypothyroidism cannot be distinguished by clinical means from secondary hypothyroidism. In both types, the thyroid profile shows depressed thyroid function, deficiency of circulating hormone, and the peripheral effects of hormone lack. If the disease is primary, that is, due to loss of thyroid tissue, injection of TSH will elicit no response, and neither the radioiodine uptake nor the PBI will rise. If the disease is secondary, that is, due to pituitary hypofunction, the injection of TSH will supply the missing tropin and the dormant thyroid will respond to stimulation. As a result, the radioiodine uptake will increase significantly, as will the PBI.

The hyperthyroid gland traps iodine excessively and secretes excessive hormone, which produces the peripheral manifestations of thyrotoxicosis. Sometimes, it is difficult to distinguish clinically borderline hyperthyroid patients from anxious normal ones. Suppose upon testing, the radioiodine uptake is found to be high. If the patient is normal, administration of triiodothyronine will inhibit TSH secretion and result in a significant decrease in uptake. If true hyperthyroidism exists, the thyroid is being stimulated by a non-pituitary factor and endogenous TSH is already suppressed. Therefore, administration of triiodothyronine will have no effect, and the radioiodine uptake will remain high. This test, which is very reliable for confirming hyperthyroidism, adds exogenous hormone to the body. This may be quite hazardous in overt hyperthyroidism, so the test should be used only in equivocal or mild cases.

TYPICAL RESULTS IN THYROID PROFILE TEST

CONDITION	RAI	PBI	T_3	BMR	SPECIAL
Normal	15-40	4-8	25-35	−15 to +10	
Simple Goiter	N	N	N	N	Scan: uniform
Nodular Goiter	N	N	N	N	Scan: cold to hot spots
Hypothyroidism, 1°	Low	Low	Low	Low	TSH: no resp.
2°	Low	Low	Low	Low	TSH: + resp.
Hyperthyroidism	High	High	High	High	No suppression c T_3
Pregnancy	(N-High)	High	Low	High	

Table I

Pregnancy often produces symptoms which suggest thyrotoxicosis. Since hyperthyroidism occurs with increased frequency in pregnancy, the physician is hard put at times to decide whether or not thyroid disease exists. In pregnancy, the radioiodine uptake increases slightly, but this test is avoided because of the radiation risk to the fetus. The BMR rises in pregnancy because of the extra metabolism of the fetus. The PBI also is increased in pregnancy because of increased thyroxin binding globulin, due to estrogen. The usual thyroid profile, therefore, may not be diagnostic. However, because of the excess thyroxin binding capacity, the in vitro T_3 test will give low values in euthyroid pregnancy. In pregnancy and hyperthyroidism, however, the in vitro T_3 test will be higher than expected and may have some diagnostic value.

Based on the physiologic principles discussed so far, the proper tests by which to follow patients under treatment can be selected (Table II). Treatment with antithyroid drugs or radioiodine cannot be evaluated by radioiodine uptake, for thyroid function has been deliberately disordered. But an estimate of the amount of hormone reaching the blood and tissues is useful, so the PBI and BMR are used to follow the patients. Suppose some months later consideration is given to a second dose of radioiodine. Here, radioiodine uptake is measured not to diagnose hyperactivity, but to establish whether a therapeutic dose will be sufficiently accumulated to warrant treatment. Suppose one wishes to prognosticate whether the now eumetabolic patient is cured of hyperthyroidism. First, the thyroid profile should be within normal limits, establishing a quantitative return to normal. If now a T_3 suppression test is done, and a brisk decline in radioiodine uptake occurs, evidence has been secured that the thyroid is once again responsive to pituitary TSH, that the abnormal stimulator has disappeared, and that a permanent cure is likely.

Patients with known hypothyroidism on treatment cannot be followed by radioiodine uptakes, for these are invariably low. If thyroxin is used, the PBI is adequate for estimating circulating levels of hormone and the BMR will reflect its metabolic effectiveness. If triiodothyronine is used, however, the PBI is unsuitable for evaluation, because T_3 does not bind well to TBG and therefore is not measured by the test. Extracts of whole thyroid from animal sources also have been shown to produce irregular serum PBI levels due to a variable amount of triiodothyronine in the preparations.

A common problem calling for proper selection of thyroid tests is that of the patient who is already taking full doses of thyroid hormone and wants to know if she need do so. If the patient is a true primary myxedema, one should not interrupt treatment to find out. Presently, the uptake will be low because of deficient thyroid function, but the PBI and BMR will be normal because of adequate replacement. A TSH stimulation test permits accurate diagnosis without interruption of medication, a lack of response will confirm the diagnosis, and the patient can be assured of the need for treatment. If the patient is actually euthyroid, the present uptake will be low due to feedback suppression, and the PBI and BMR will be normal because of the replacement of endogenous by exogenous hormone. A TSH test again permits accurate diagnosis. A positive response will be obtained indicating the patient has her own thyroid gland.

THYROID PROFILE IN THERAPEUTIC PROBLEMS

	TEST			
PROBLEM	RAI	PBI or T_3	BMR	SPECIAL
HYPERTHYROIDISM				
On PTU Rx	blocked	x	x	—
After RAI Rx	variable	x	x	—
Another dose RAI?	x	x	x	—
Is Pt. cured?	x	x	x	T_3 supp.
Is Pt. hypothyroid?	x	x	x	TSH stim.
HYPOTHYROIDISM				
Proven, on T_4 Rx	absent	x	x	—
Proven, on T_3 or Extract Rx	absent	unreliable	x	—
EUTHYROIDISM				
On T_4 Rx	suppressed	normal	normal	TSH stim.
On T_3 Rx	suppressed	suppressed	normal	TSH stim.

Table II

It is likely that a misdiagnosis has been made and thyroid medication can be stopped.

Having now discussed what thyroid tests measure and how we use them, where are the pitfalls that are to be avoided? Error may appear from many sources. The technician may miscalculate — decimal errors occur now and again in the radioiodine uptake. Or an exhausted CO_2 absorbant may be used in the BMR apparatus. Look out for extraneous factors which may affect the test. Heavy metals interfere chemically with the PBI method. If the patient has received a mercurial diuretic or a gold injection recently, PBI values will be depressed and have no meaning. Learn the normal limits for the test as done in the laboratory you use. For example, normal values for the T_3-erythrocyte uptake test in a well-known commercial laboratory are considerably lower than the normal values for the T_3 uptake by ion exchange resin in our laboratory.

These are technical and methodologic errors that are fortunately quite rare. The remainder of the pitfalls unfortunately are physician errors. A common one is the omitted test. A patient presents with cachexia and diarrhea, and the barely palpable thyroid is not considered significant. How likely it is that this patient will be studied and restudied for occult intestinal malignancy until someone thinks to do a thyroid test and discovers yet another example of apathetic hyperthyroidism. Another example is the failure to test all hypothyroid patients with TSH. This will result in failure to discover those whose disease is secondary to hypopituitarism and may lead to disastrous adrenal insufficiency when thyroid hormone therapy is instituted.

Selection of the wrong test is another possible pitfall. As I have just pointed out, the PBI does not adequately measure circulating T_3. I have seen patients who have been given T_3 to the point of toxicity because the physician was treating the PBI and not the patient, and the PBI did not change as the dose of T_3 was increased and increased again!

Additional pitfalls include reliance upon one thyroid test when more than one is called for, failure to appreciate the limits of the information derived from a given test, and misinterpretation of a physiologic variation for a pathologic one. Let me illustrate these pitfalls next.

In a number of disorders of the thyroid, the results of the tests of the thyroid profile move in opposite directions (Table III). Reliance upon one test alone instead of the entire profile might lead to erroneous conclusions. As an example, consider what happens in thyrotoxicosis factitia, wherein the patient surreptitiously ingests thyroid to the point of toxicity. The patient appears toxic, and the PBI and BMR are abnormally high. These results do not indicate hyperthyroidism, however, for unlike true hyperthyroidism, the radioiodine uptake will be found to be low, TSH having been suppressed. A similar phenomenon occurs in struma ovarii, where ectopic thyroid tissue in the ovary secretes thyroxin that suppresses TSH and the function of the cervical thyroid. An example of opposite divergent results is found in iodine deficient goiter. I was once asked to see a young woman suspected of having hyperthyroidism because of goiter and

DISCREPANT RESULTS IN THYROID PROFILE TEST

CONDITION	RAI	PBI	T_3	BMR	SPECIAL
Thyrotoxicosis factitia	Low	High	High	High	TSH: + response
Struma ovarii	Low	N — High	N — High	N — High	TSH: + response Scan: pelvis
Thyroiditis, subacute	Low	High	High	High	TSH: + response
Thyroiditis, chronic a)	Low	Low	Low	Low	TSH: no response
b)	High	Low	Low	Low	SCN^- washout +
c)	High	High	Low	Low	BEI: low; iodoprotein: +
I_2 Deficient goiter	High	N — Low	N — Low	N — Low	T_3 suppression +
Goitrous cretin	High	High	Low	Low	T_3 suppression +

Table III

nervousness. The radioiodine uptake was over 70%, indicating the thyroid was avidly trapping iodine. The patient was a food faddist and on an inadequate diet. Hyperthyroidism was ruled out and a dietary deficiency of iodine was indicated by the finding of a slightly low serum PBI. Here then was a situation wherein dietary deficiency of iodine limited hormone synthesis, resulting in a low PBI and an increased endogenous TSH secretion. The excess TSH stimulation led to goiter and a high radioiodine uptake. Instead of being hyperthyroid, this patient was functionally hypothyroid and supplementation of diet with iodine quickly reversed all abnormalities.

In Hashimoto's struma and in certain congenital errors of hormone synthesis leading to goitrous cretinism the results of the thyroid tests are also divergent. Here, too, the explanation resides in the altered physiology produced by the disease. Reliance on one test rather than the profile can lead to misdiagnosis.

Failure to appreciate the diagnostic limitations of a given thyroid test can also lead to significant error in diagnoses and treatment. The BMR perhaps has been the most abused test in this regard. To this day, it is a common clinical experience to encounter patients who are being treated with desiccated thyroid because of a BMR of minus 20%. Most often these patients are overweight, and the low BMR is explained by obesity, not hypothyroidism. Uncomplicated true myxedema almost always produces a BMR of -30 to -40%. Basically, the BMR produces an estimate of the over-all metabolic state of the body, only part of which is the result of thyroid hormone activity. Malignancy, for example, has an independent rate of metabolism not related to thyroid hormone. I have seen patients having both myxedema and leukemia who have had BMR's over +1%. Here, the increase in BMR from the usual myxedema level of —40% to over +1% is due to the high metabolic rate of the leukemic cells. The patient's other tissues are completely myxedematous. In congestive failure, the BMR is increased because of respiratory muscle activity. The metabolic rate is not really basal, because the patient is working hard in order to breathe. In general, the BMR has marked limitations if used for the diagnosis of thyroid dysfunction. It is a useful test, however, to assess the results of therapy in otherwise proven thyroid disease, as for example the effect of propylthiouracil in hyperthyroidism and of thyroxin in myxedema.

Nowadays, of course, physicians lean more heavily on the radioiodine uptake and the PBI than on the BMR. But in these tests, too, an understanding of their limitations is required to avoid erroneous interpretation of the results. Assuming there is no technical error, these tests do not produce "false results," for the values are true reflections of the physiologic state. Results may be "false" in the sense that a high value is not indicative of hyperthyroidism and a low value of hypothyroidism.

There are several circumstances in which the trapping of iodine by the thyroid is increased, even though hyperthyroidism does not exist. Common to all is an alteration of physiology leading to excess TSH secretion. This enhances trapping and results in a high radioiodine uptake. A triiodothyronine suppression test should be performed whenever a false high uptake is suspected. The administration of this drug for one week will significantly depress the uptake if it is high physiologically, ruling out hyperthyroidism. If the uptake remains unchanged after triiodothyronine administration, it is indicative of true hyperthyroidism.

The most common disturbance of the radioiodine uptake is the production of a low test result by a substance which has interfered with trapping. Iodine, in its many inorganic and organic forms, is the most common offender. Some iodine compounds are excreted rapidly and interfere but for brief periods. But some persist for a long time. A few years ago, a gallbladder dye was introduced with a half-life in the serum of over 30 years!

Antithyroid drugs interfere with the uptake by preventing binding of iodine and allowing the tracer to wash out of the gland before the measurement is made. Goitrogens act in a similar fashion. Exogenous thyroxin and triiodothyronine inhibit TSH, and thereby suppress uptake. Large doses of steroids occasionally depress uptake, but this is not a common problem in my experience.

Let me also mention the example of a false low uptake produced by an unsuspected interfering substance. We were once asked to see a patient on the Surgical service because her radioiodine uptake was found to be 3%. She appeared perfectly euthyroid clinically and the PBI and BMR were normal. We could obtain no

history of ingestion of iodine or other drugs. She was being treated for chronic leg ulcer, however, and we learned that the dressings were being soaked with Dakin's solution. Dakin's solution contains sodium hypochlorite. Like perchlorate ion, hypochlorite ion must block the trap, for when the Dakin's solution was replaced by saline, a normal radioiodine uptake was obtained. One must ever be alert to interfering substances.

Finally, there are a number of causes for low and high PBI values which are not related to thyroid disease. Most factors causing false elevations of the PBI do so by producing an increase in thyroxin binding globulin. This is associated with a low T_3-erythrocyte uptake test. Most factors causing false reductions of the PBI do so by producing a decrease in thyroxin-binding globulin. This is associated with a high value for the T_3-erythrocyte uptake test. The combination of these two tests is a good way to identify such non-thyroid factors, for the PBI and T_3 test move in opposite directions. By contrast, when true hyperthyroidism or hypothyroidism exist, thyroxin-binding globulin is not affected and the PBI and T_3 tests move in the same direction.

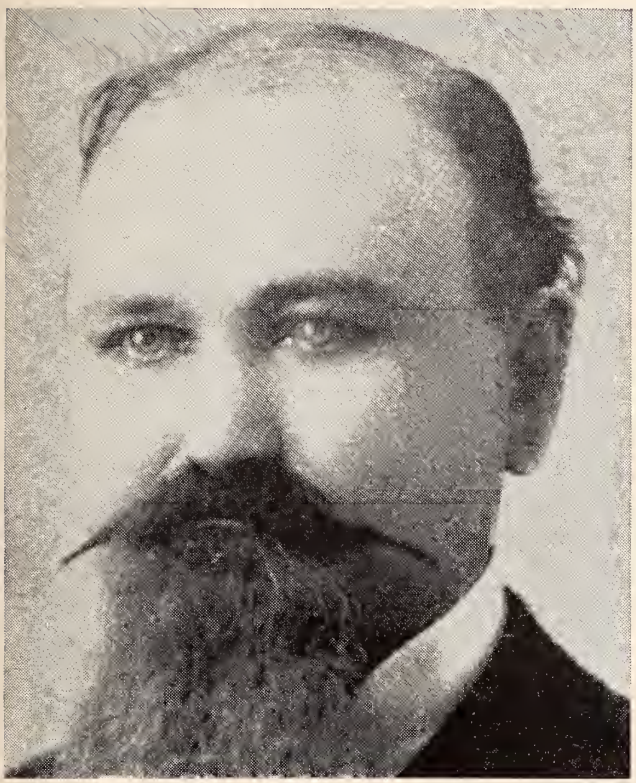
The ultimate pitfall in thyroid tests is, of course, the unquestioned acceptance of test results by the uninformed physician. In the final analysis, clinical judgment remains the best single way to diagnose thyroid disease. Thyroid tests supplement, extend and confirm clinical judgments. But no single test or group of tests should be accepted without question. Interpretation depends upon understanding. In the realm of thyroid disease, we are fortunate that an intimate understanding of normal and altered physiology has been developed and that a variety of excellent and practical tests exist to demonstrate the altered physiology. If the physician will understand the basis for the thyroid tests and will carefully integrate test results with the clinical findings, he will avoid most of the pitfalls that are likely to be found in thyroid tests.

BRAND OR GENERIC — LET THE PHYSICIAN DECIDE

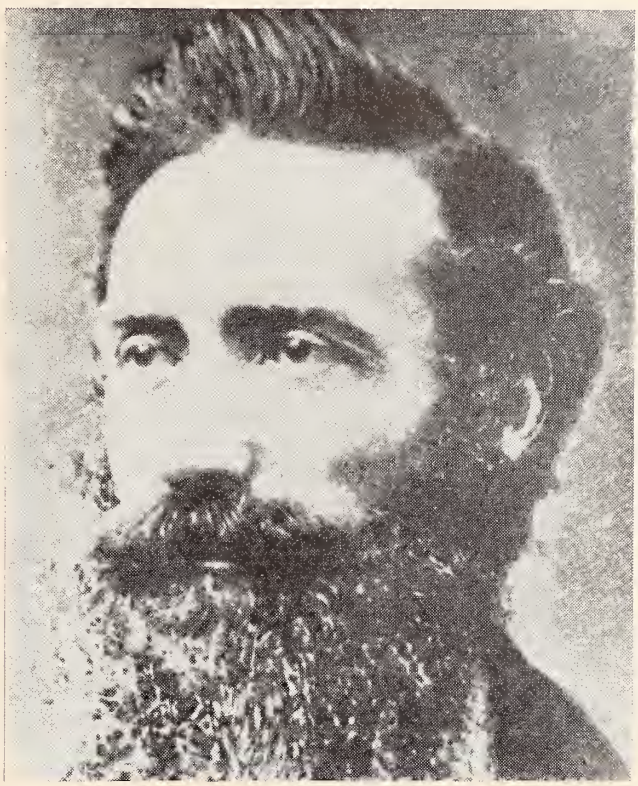
The generic name versus trade name has been and is one of those tiresome issues that never seems to get settled and is always good for a political "hoorah." As a physician, I have to prescribe drugs and my patients have to use and pay for them. Perhaps I have been too permissive, but I do not believe the cure is adoption of all generic names and federal control. I believe the problem is not all that complicated unless we prefer to make it so. Is it disrespectful to suggest that the decision should rest principally in the hands of the thoughtful physician? And you know there are some! — Irving H. Page, M.D., in *Modern Medicine*, (34:107), June 6, 1966.

ARIZONA'S MEDICAL MEMORIES

Audrey D. Stevens



James H. Taggart, M.D.



Albert E. DeCorse, M.D.

Two years ago I compiled a short history of Arizona's surgeons, and since then my studies have become an irresistable hobby. In my history I included a resume of a gunshot wound inflicted upon J. H. Taggart, M.D. Recently, I located an article on this subject published in 1883 in the "Pacific Medical and Surgical Journal." This is perhaps the first article written by an Arizona physician to be published in a nationally recognized medical journal.

Dr. A. E. DeCorse, author of the article and partner of Dr. Taggart, was also one of the first medical doctors to practice in Yuma. About 1867, after serving for the Union Army, during the Civil War, he began practice in Yuma. Aside from his private practice he served as contract surgeon in the old Yuma Territorial Prison. Dr. DeCorse died in 1891, and is still survived by one son.[1]

Dr. Taggart moved to Yuma in 1877 or 1878. He was evidently newsworthy from the beginning of his residency, as there are scattered notations of his activities from the time he arrived until his death in 1893.

Like nearly all of the early settlers of Arizona Dr. Taggart carried a gun and on at least two occasions it could have proven his undoing. There is a notation in Dr. Orville H. Brown's collection of unpublished material which reads:

"Captain Jack Mellon was one of the widely known steamboat men on the Colorado. It is told that Mellon's wife was ill and Dr. Taggart, the only medical man in town, was called to attend her. When Mrs. Mellon had recovered, Dr. Taggart presented her husband with an exorbitant bill of $500.00. Captain Mellon paid it and said nothing. Some little time later Dr. Taggart was called to Ehrenberg on a serious

case and Captain Mellon took him up the river in the steamer Mohave. When they returned and Dr. Taggart offered to pay his fare, Captain Mellon took a ruler and measured the doctor, then after long calculations and deliberations, informed him that his bill was $500.00. When Dr. Taggart protested, Mellon reminded him that the physician's bill had been paid without a murmur and with a drawn pistol quietly informed him that he rather expected that he would have to pay the $500.00. The money was not long in changing hands."[2]

There are several accounts of Dr. Taggart's published shooting spree. The first one reads:

"On Thursday morning, (Feb. 23) at about half past six o'clock, Yuma was startled by the occurrence of a shooting affair that was as painful as it was uncalled for. Briefly stated: Dr. Taggart was shot in the stomach by George Angelo and in defending himself Dr. Taggart shot Angelo through the breast. The aggressor, Angelo, has been in a cranky condition for some time past, and has had an idea that he had been cheated out of the property on Madison Avenue, known as the Spear property, which is owned by Dr. Taggart. He had frequently made threats against the tenants of the property, and on Wednesday last, he warned them all to vacate the premises, threatening to kill them if they did not comply. This threat, while it did not seriously alarm them, was sufficient to put Dr. Taggart on his guard. On Thursday morning, about half past six o'clock, Angelo went to the Doctor's residence, and entering the yard at the side gate, passed through to the building on the corner of Madison Avenue and First Street, occupied by Drs. DeCorse and Taggart as an office and commenced kicking at the door. This brought the Doctor out and upon arriving at the door he found Angelo inside his office, engaged in gathering up the books and bottles, with evident intention of throwing them into the street.

"As soon, however, as Angelo saw the Doctor he dropped the things he had in his arms, and, seizing a stick, he struck Dr. Taggart on the head. At this the Doctor turned and left the office, followed by Angelo, who was still trying to strike him. It was then that the shooting commenced. When they were both on the side of the house next to the railroad track Angelo drew his pistol and shot at the Doctor, who returned the compliment, Taggart firing two shots, and Angelo three. While firing, Taggart had been walking backwards, and finding himself badly hurt, he turned and went into his house. Angelo also turned and went into the office and fell on the floor where he was found shortly after with an ugly hole in his left breast."[3]

This article was followed by short notices of Doctor's recovery and on April 1, 1882, there was a notice stating: "Dr. Taggart continues to improve and we are authorized to state he is now out of danger."[4]

For today's physicians the following article should be even more interesting. It is taken from the original article in the "Pacific Medical and Surgical Journal."

"GUNSHOT WOUND OF THE LIVER – RECOVERY"

By A. E. DeCorse, M.D., of Yuma, Arizona

"J. H. Taggart, M.D., aged 45½ years, was shot on the morning of February 22, 1882, at 7 o'clock, from a distance of less than two yards. The weapon used was a Colt's revolver, navy pattern, old style, and loaded with powder and ball. Three shots were fired by the assailant, only one of which, the first, took effect. The bullet struck first the right hand at the knuckle of the forefinger, and emerged at the metacarpal bone of the thumb, disabling both thumb and finger; then passing through a very heavy coat, vest and two shirts, it entered the body on a level with and about three inches to the right of the ensiform cartilage, injuring the cartilage of the sixth rib; then passing through the body and coming to rest under the integument between the tenth and eleventh ribs, about two inches to the left of the spinal column. By a strong effort, the injured man kept his feet, drew his own weapon, and returned the fire, with such good effect that he inflicted a fatal wound on his antagonist at the first fire. He too kept his feet, and after one shot more on each side without effect, the doctor went to his house, some fifty yards distant, and went to bed.

"I saw him fifteen minutes after the shooting. He was suffering severely from the shock; pulse 48; felt very cold. The body was bathed in a cold sweat and the skin very pallid. Gave morph. sulph. gr. ¼ every hour.

"9 a.m. Consultation with Dr. Corson, U.S.A. Pulse 54; no thirst; slight nausea; feeling colder; some pain in region of wound referred to the diaphragm and incited by acts of respiration. Morphia increased to gr. ½ every hour. Patient would take no stimulants for fear of nausea, nor

permit any examination of the wound.

"12 n. He feels better; not so cold, pulse 60 and more firm; has drank a little water. The wounds were examined and the location of the bullet pointed out by the patient, who felt it lodge where found, and whence it was removed by a slight incision in the skin. No hemorrhage to speak of externally. As reaction comes on, the pain, spasmodic in character and seemingly confined to the diaphragm, increases. Morphia increased to 1 gr., to be repeated every hour till its effects are obtained.

"3 p.m. Pulse 101; pain agonizing; Ext aconite gtt. iss every two hours; morph. gr. ij every hour."

For several pages there are hourly and then daily recordings of Dr. Taggart's pulse, temperature and comments on his condition. A few more of the more interesting comments read:

"24th, 1 a.m. Pulse 117; respiration 34. Pain less severe, but radiating over abdomen and right breast.

"2 p.m. Pulse 128; resp. 30; feels easier. Morphia and aconite to be given every four hours. No symptoms of narcotism, notwithstanding the large amount of morphia taken.

"8:30 p.m. Sudden and general relaxation of system, with cessation of all pain. Pulse 165, soft and regular; temp. 100'; resp. 32. Medicine all stopped. Feels faint and takes a glass of milk, which is relished.

"March 1st, 10 a.m. Pulse 100; resp. 29. Some pain in vicinity of the wound in front of the body is relieved by liniment of chloroform and aconite. Continued much the same through day. day.

"March 6th, 12 m. Pulse 96; resp. 27. Rests well. Wounds dressed with cerate. Is taking no medicine except an occasional dose of morphia to control the excessive irritability of the diaphragm."

The remainder of the article reads:

"19th, 9 a.m. Less sweating; much picking at the bed clothes while dozing. Belladonna stopped.

"9 p.m. Pulse 101; temp. 102'. Some muttering during sleep with increased twitching of muscles and pain in shoulder.

"From this time onward he continued to improve slowly, with occasional pain in the shoulder, sometimes severe for a brief period. The sweating also continued to give some trouble. His food consisted principally of milk, of which he drank two quarts daily. Constipation was still troublesome; spasms of the diaphragm were also of frequent occurrence, interfering with active movements of the chest. He began to sit up on the 21st, and to walk a little by the beginning of April. By the 9th of April he was walking in the street, and convalescence was considered to be fully established.

"May 1st. The improvement in strength has been steady, and the sweating has almost disappeared. The soreness of the chest, which so far has been very annoying, has diminished somewhat, but only the shortest breathing can be effected, because of the irritability of the diaphragm, which causes it to take on a sudden and painful spasmodic action whenever the lungs are sufficiently inflated to begin to press it down.

"June 1st. During the month the progress toward the re-establishment of health has been slow but quite steady. The soreness in the right side having diminished to such a degree as to make it possible without too great pain, an examination of the right lung was had some ten days since, by auscultation and percussion. The lower lobe of the right lung was found to be solid in front, though somewhat resonant behind. There has not been at any time any symptom indicating that the parenchyma of the lung was involved, and the patient himself was much surprised to find it so. The shortness of breath has heretofore been considered as entirely due to inflammation of the diaphragm and pleura. Iod. Potass. gr. iv, three times a day, is taken, and the side is painted daily with tinc. iodine.

"July 1st. The iod. pot. was only used about three weeks, as it disagreed with the stomach. The tincture was used externally some time longer, and was stopped when the lung seemed to be pervious to air in its entire extent. Indeed, from the time the hepatization was found, absorption seemed very active, and in this manner was removed the entire inflammatory deposit, no expectoration having been present at any time. Very fortunate, too, is it that it was so, as even a sneeze causes severe lancinating pain, which is not recovered from for hours. The patient is constant in his watch, both night and day, against a sneeze, a cough, or a full breath while the impulse to fill the lung is sometimes almost uncontrollable, and is felt much more as he walks around more.

"Oct. 1st. Strength pretty well re-established, but little change in the soreness and irritability of the diaphragm and pleura.

"November 1st. Has been using a series of blisters over the episgastrium and right pectoral region for the last two weeks, since it became cool enough to do so without too much discomfort. A blister about 4 x 6 inches was allowed to draw well in the former position. It was dressed with cabbage leaves till it showed signs of healing, when the raw surface was dressed with cerate and the blister applied to the second location, where the same course was followed, and so the alternation from one place to the other is going on.

"December 1st. The blistering was kept up as before described till about November 15th, when it was discontinued. The net results are on the whole satisfactory; for while comparatively little benefit has resulted to the pleura, the diaphragm gives no more trouble. There is no more of that spasmodic catching in breathing.

"1883, January 1st. The pleura is in about the same state as last month. It is believed that another course of blisters on the right side will remove this trouble finally. The patient is still very much constipated, as he has been from the first. He has not had a single passage from the bowels that was not procured by some laxative or clyster, and sometimes an active cathartic has been required. His weight before the injury was 220 pounds; it is now 190 pounds. His least weight was about April 1st, 170 pounds. In all respects, excepting the persistent soreness in the pleura and the constipation, he feels as well as before he was injured."[5]

This historical article by Dr. DeCorse illuminates an era when physicians suffered wounds from gun shots instead of motor cars. The surgeons particularly will be amused at the description, and all of us must wonder at the good fortune of the patient who lived eleven years after such a traumatic experience.

BIBLIOGRAPHY

1. Podolsky, A. I., personal correspondence, (unpublished), (May 22, 1962).
2. Brown, Orville Harry, collection HISTORY OF MEDICINE IN ARIZONA. (unpublished). Vol. 5.
3. ARIZONA SENTINEL – Yuma, Arizona, (February 25, 1882), 2:3.
4. Ibid. (April 1, 1882), 2:3.
5. DeCorse, A. E., "Gunshot Wound of the Liver -- Recovery." PACIFIC MEDICAL AND SURGICAL JOURNAL, XXVI, 1883, pp. 249.255.



Audrey D. Stevens

Mrs. Stevens is the wife of
W. C. Stevens, M.D., of Kearny, Arizona.

block end runs



LOMOTIL® tablets liquid

Each tablet and each 5 cc. of liquid contains:
diphenoxylate hydrochloride 2.5 mg.
(Warning: May be habit forming)
atropine sulfate 0.025 mg.

tackles the problem of diarrhea directly

Effectiveness—Physiologic evidence indicates that Lomotil acts directly on the smooth muscle of the bowel to lower motility and control diarrhea. This action is unsurpassed in promptness and efficiency.

Convenience—Lomotil is available as small, easily carried, virtually tasteless tablets and as a pleasant, fruit-flavored liquid.

Versatility—The therapeutic efficiency, safety and convenience of Lomotil may be used to advantage alone or adjunctively in diarrhea associated with:

- **Functional hypermotility**
- **Irritable bowel**
- **Acute infections**
- **Gastroenteritis and colitis**
- **Malabsorption syndrome**
- **Regional enteritis**
- **Ileostomy**
- **Ulcerative colitis**
- **Food poisoning**
- **Drug therapy**

For correct therapeutic effect
Rx correct therapeutic dosage

Dosage: The recommended initial daily dosages, given in divided doses until diarrhea is controlled, are:

Children: Total Daily Dosage

3-6 mo. . .	½ tsp.* t.i.d. (3 mg.)
6-12 mo. .	½ tsp. q.i.d. (4 mg.)
1-2 yr. . . .	½ tsp. 5 times daily (5 mg.)
2-5 yr. . . .	1 tsp. t.i.d. (6 mg.)
5-8 yr. . . .	1 tsp. q.i.d. (8 mg.)
8-12 yr. . .	1 tsp. 5 times daily (10 mg.)
Adults: . .	2 tsp. 5 times daily (20 mg.) (or 2 tablets q.i.d.)

*Based on 4 cc. per teaspoonful.

Maintenance dosage may be as low as one-fourth the initial daily dosage.

Precautions: Lomotil, brand of diphenoxylate hydrochloride with atropine sulfate, is a Federally exempt narcotic preparation of very low addictive potential. Lomotil should be kept out of reach of children since accidental overdosage may cause severe respiratory depression. Recommended dosages should not be exceeded. Lomotil should be used with caution in patients with impaired liver function and in patients taking addicting drugs or barbiturates. The subtherapeutic amount of atropine is added to discourage deliberate overdosage.

Side Effects: Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness, insomnia, numbness of extremities, headache, blurring of vision, swelling of the gums, euphoria, depression and general malaise.

SEARLE *Research in the Service of Medicine*

How long will it take her to recover from her hip fracture if she just doesn't care?



Does she really care?
she alert, encouraged,
)sitive and optimistic
)out getting completely
ell soon?
Or has she given in to
e demoralizing impact
confinement, disability
)d dependency?
When functional fatigue
)mplicates convalescence,
lertonic can help...

Pleasant-tasting Alertonic is pipradrol hydrochloride—an effective cerebral stimulant whose gentle analeptic action helps counteract the apathy and inertia that can often delay convalescence—together with an excellent vitamin and mineral formula, in a satisfying 15% alcohol vehicle.

Nothing fosters confidence and a sense of well-being better than your own personal warmth, understanding and encouragement together with Alertonic to help insure prompt response.

Adequate dosage is important: Prescribe Alertonic—one tablespoonful t.i.d., 30 minutes before meals...tastes best chilled.

And for your patient's sake, prescribe Alertonic in the convenient, economical one-pint bottle.

Alertonic®

Available Only On Prescription

Each 45 cc. (3 tablespoonfuls) contains: alcohol, 15%; pipradrol hydrochloride, 2 mg.; thiamine hydrochloride (vitamin B_1) (10 MDR*), 10 mg.; riboflavin (vitamin B_2) (4 MDR), 5 mg.; pyridoxine hydrochloride (vitamin B_6), 1 mg.; niacinamide (5 MDR), 50 mg.; choline,† 100 mg.; inositol,† 100 mg.; calcium glycerophosphate, 100 mg. (supplies 2% MDR for calcium and for phosphorus) and 1 mg. each of the following: cobalt (as chloride), manganese (as sulfate), magnesium (as acetate), zinc (as acetate), and molybdenum (as ammonium molybdate).

*Multiple of adult Minimum Daily Requirement supplied.
†The need for these substances in human nutrition has not been established.

Indications: 1. Functional fatigue such as that often associated with: a depressing life experience or stressful time of life; advancing years; convalescence; limited activity or confinement. 2. Poor appetite and vitamin-mineral deficiency as they occur in: patients having faulty eating habits; geriatric patients who are losing interest in food; patients convalescing from debilitating illness or surgery.

Dosage: Adults, 1 tablespoonful; children (over 15 years old), 1 to 2 teaspoonfuls; children (4 to 15 years old), 1 teaspoonful. To be taken three times daily 30 minutes before meals.

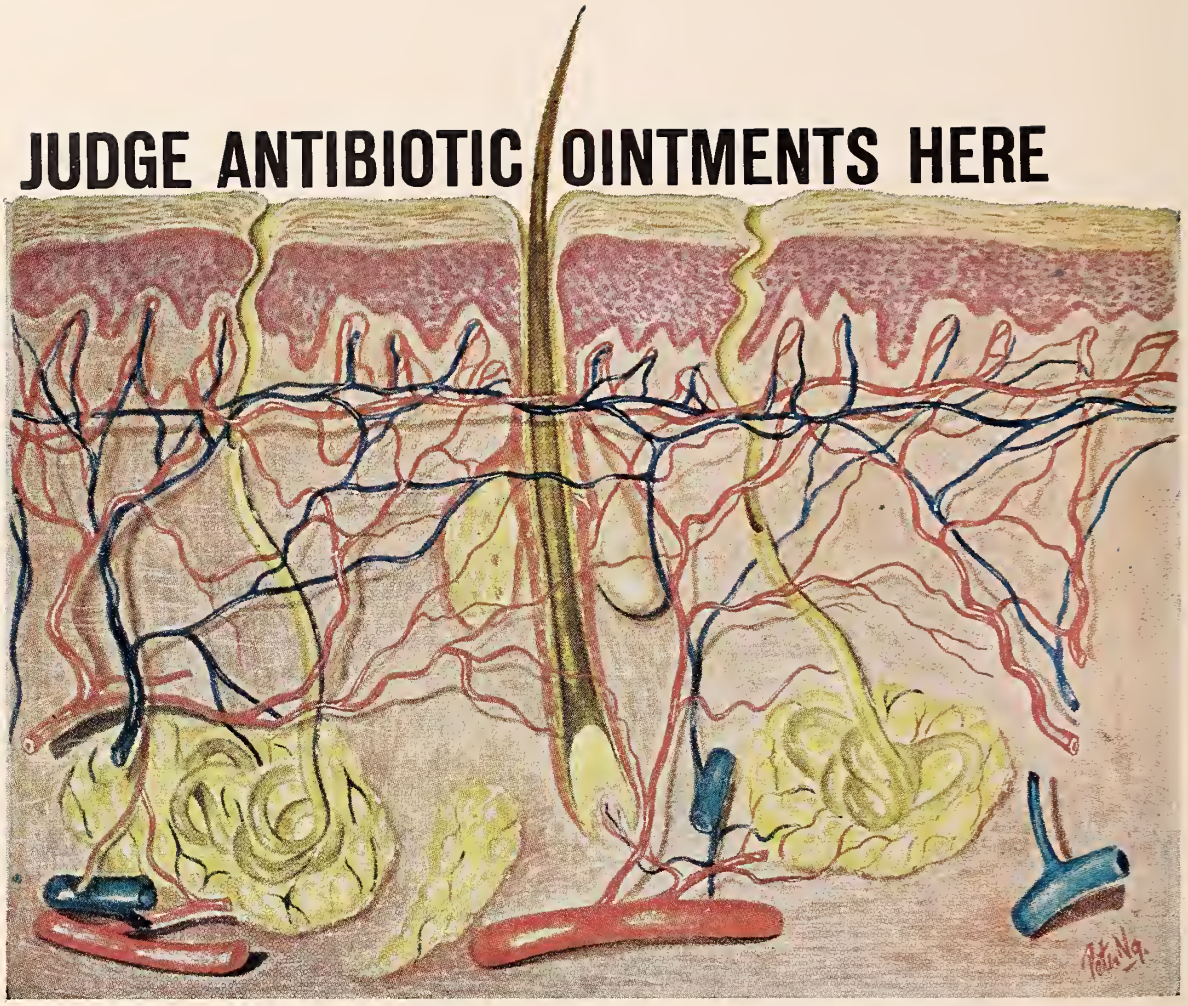
Contraindications: As with other drugs with CNS stimulating action, Alertonic is contraindicated in hyperactive, agitated or severely anxious patients and in chorea or obsessive compulsive states.

Side effects: Reports of overstimulation have been rare. Patients who are known to be unduly sensitive to the effects of stimulant drugs should be observed carefully in the initial stages of treatment.

Merrell

THE WM. S. MERRELL COMPANY
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

JUDGE ANTIBIOTIC OINTMENTS HERE



Results on skin are final proof of any topical antibiotic's effectiveness

No in vitro test can duplicate a clinical situation on living skin. 'Neosporin' (polymyxin B—bacitracin—neomycin) Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and nonirritating.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Supplied: Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.

Complete literature available on request from Professional Services Dept. PML.

'NEOSPORIN'®
brand

POLYMYXIN B-BACITRACIN-NEOMYCIN OINTMENT

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.



Paul B. Jarrett, M.D.

WHAT'S IN A MIRACLE?

One of the stories told about Doctor Joseph Greer is that he read several pages of "Science with Key to the Scriptures" to a patient who had been reading this volume at the time she yawned and dislocated her jaw.

When it became obvious to both of them that additional reading was not going to accomplish a reduction, Doctor Greer wrapped his thumbs with gauze and reduced her dislocated mandible.

It is not thought that Doctor Greer did this to be funny or cruel. He was attempting to point out against future, more serious need, that the Almighty had already made tangible provisions for help.

There is no doubt in the minds of most physicians that the Creator, if He chose, could cure anyone and anything by unusual and miraculous means; through prayer, the laying-on of hands, or, as in biblical times, by following some direction for bathing in a certain pool. Indeed there is reason to believe that He does cure by unusual means still.

This isn't His usual and customary (I love that phrase) method of healing however. God gave us brains and He expects us to use them. He gave us physicians and He expects us to use them too.

It is really none the less to His credit or none the less miraculous that a patient is cured through the medium of a physician and drugs or surgery, than by the laying-on of hands. The power as ever is His.

Doctor Thomas Woodman had a patient who was very reluctant to come to a physician with an inflammatory carcinoma of the breast. Finally pain drove her to his office. She felt that seeing a doctor would be a renunciation of her faith in God's ability to heal her. Poor tormented soul!

It would seem rather impertinent to require of God that He heal us in some unusually miraculous way, when indeed all healing by any means is God's doing.

How fortunate, too, that one need not be a Saint to participate in this program.

Paul B. Jarrett, M.D.

Soyalac SOLVES THE PROBLEM

...and BABY APPROVES!

Baby has a thing or two to say about a hypo-allergenic, milk-free diet!

Soyalac is the good-tasting, fibre-free formula that infants readily accept. The exclusive Soyalac process results in a consistency much like milk, with a light, creamy color—and nut-like flavor but without a trace of sediment.

Soyalac satisfies the infant. Strikingly similar to mother's milk, it provides protein of high biologic value and balanced nutrients. Clinical data furnish evidence of Soyalac's excellence in promoting normal growth and development.





Free Booklet and Samples

A request on your professional letterhead or prescription form will bring to you complete information and a supply of samples.

Soyalac

a product of

LOMA LINDA FOODS

MEDICAL PRODUCTS DIVISION

RIVERSIDE, CALIFORNIA

Mount Vernon, Ohio, U.S.A.



UP TO 10-12 HOURS' CLEAR BREATHING ON ONE TABLET

Dimetapp® Extentabs®

(Dimetane® [brompheniramine maleate], 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.)

In sinusitis, colds, or U.R.I., Dimetapp lets congested patients breathe easy again. Each Extentab brings welcome relief all day or all night, usually without drowsiness or overstimulation. Its key to success? The Dimetapp formula—Dimetane (brompheniramine maleate), a potent antihistamine reported in one study to have elicited side effects as few as the placebo,* teamed with decongestants phenylephrine and phenylpropanolamine—in a dependable 10- to 12-hour form.

*Schiller, I. W., and Lowell, F. C.: New England J. Med. 261:478, 1959.

Contraindications: Patients hypersensitive to antihistamines. Not recommended for use during pregnancy.

Precautions: Until the patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension.

Side Effects: Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability, or excitement may be encountered.

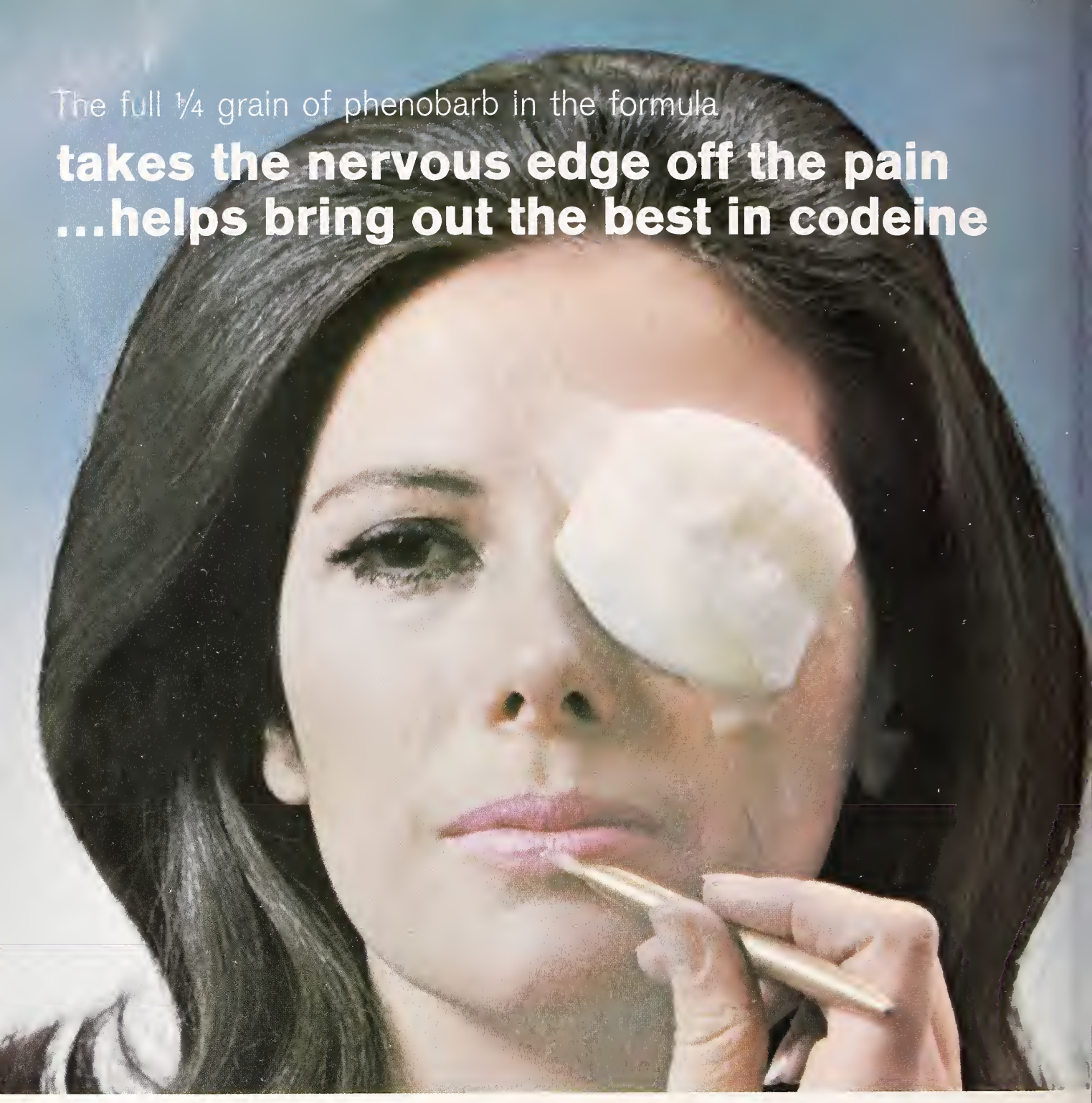
Dosage: 1 Extentab morning and evening, or as needed.

Supplied: Bottles of 100 and 500.

Also available: Dimetapp® Elixir for conventional *t.i.d.* or *q.i.d.* dosage. See package insert for further details.

A. H. ROBINS CO., INC.
RICHMOND, VIRGINIA 23220

A·H·ROBINS



The full ¼ grain of phenobarb in the formula

takes the nervous edge off the pain ...helps bring out the best in codeine

Phenaphen® with Codeine

the only leading compound analgesic that calms instead of caffeinates

Each capsule contains:

Phenobarbital (¼ gr.) 16.2 mg.
(Warning: may be habit forming)
Aspirin (2½ gr.) 162.0 mg.
Phenacetin (3 gr.) 194.0 mg.
Hyoscyamine sulfate.....0.031 mg.
Codeine phosphate.....¼ gr. (No. 2), ½ gr. (No. 3), 1 gr. (No. 4)
(Warning: may be habit forming)

Contraindications: Hypersensitivity to any ingredient.

Precautions: As with all phenacetin-containing products, avoid excessive or prolonged use.

Side Effects: Side effects are uncommon—nausea, constipation, and drowsiness have been reported.

A-H-ROBINS

A. H. ROBINS CO., INC., Richmond, Va. 23220

CLINICAL FACILITIES: FUNCTIONAL DESIGN

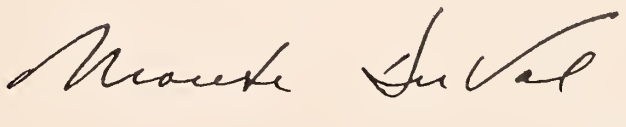
It has been said that the internal, functional design of a teaching hospital is one of the most complex and difficult assignments that an architect can undertake. As a result only a handful of architectural firms, who make the design of such plants their special concern, is available for advice and counsel. One of these is working closely with our local architect to ensure a successful translation of our requirements into such a building. Thus far, we are very pleased with the results of this arrangement.

However, the teaching hospital is only one part of the medical center which, of necessity, includes several other components. One of these is the clinical sciences wing which encompasses the offices, laboratories and lecture halls for the clinical scientists and students in the clinical years. Second, there is the outpatient area. Third are the in-patient nursing units. Fourth are the administrative and supporting services and fifth is the area allotted to the mechanical, heating and cooling functions. As if this strange intermixture of teaching spaces, clinical research areas and certain unique entities such as audio-visual, animal and library services were not enough, the situation is further confounded by the somewhat arbitrary, but essential, division of academic responsibilities into "departments". These are the considerations which make the functional design of the physical plant so complicated.

As we entered into the planning stage for Arizona's University hospital we enumerated three conditions which we hoped our design would satisfy. First, we requested that similar functions be stacked vertically; second, we felt that similar services should be stratified horizontally; and third, we wanted a design which would permit later expansion in such a manner that the efficiency of the building would not decrease. We think that all three of these conditions have been successfully met in our design. From a functional viewpoint, our building is made up of three "wings". One of these houses the departmental laboratories and offices, a second contains the outpatient area and a third is made up of the in-patient nursing units. Thus, on any one floor, an academic department is geographically adjacent to both its out-patient and in-patient areas. This is how we achieved both horizontal stratification by service and vertical stacking by function. Each of the wings is six stories tall. They rise from a three-story rectangular base which contains the supporting services such as administration, dietetics, pharmacy, radiology, clinical laboratories, operating rooms, medical records and appropriate mechanical and storage spaces. Our adoption of this portion of the design commits us to expand these supporting services whenever the nursing units are expanded thereby fulfilling the third condition.

There are a few other points of interest about the building. For example, it is physically contiguous with the basic sciences building. On the lower floors this brings the clinical administrative functions next to the medical school administrative areas. It also permits expansion of both the central animal quarters and the medical library into contiguous space. Thus, each of the latter two functions is automatically assured of new space as soon as the second building is occupied. From the academic viewpoint, the design places the offices of the clinical department heads immediately adjacent to their basic science counterparts. Thus, from the conceptual viewpoint, there is a vertical "cylinder" which encompasses the junction between the basic and clinical science buildings in which all of the offices of the academic chairmen are located.

Last, the complex fits the "master plan" such that the academic departments of the basic sciences, the library, animal quarters and medical school administration are closest to the main campus of the University. The in-patient units are located so that they are farthest from the main campus. The out-patient and visitor areas are situated closest to Campbell Avenue which is the main, north-south traffic route adjacent to the medical center.



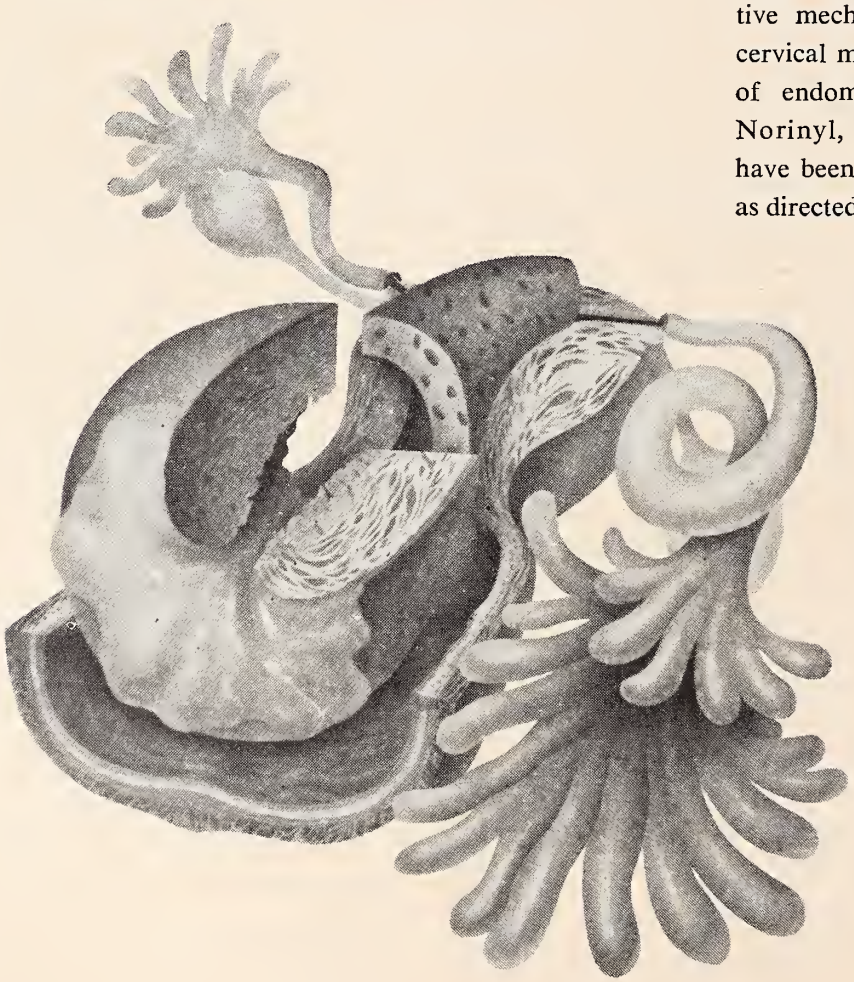
Norinyl® tablets
(norethindrone 2 mg. c mestranol 0.1 mg.)

for multiple contraceptive action that has produced a record of unexcelled effectiveness

inhibition of ovulation by means of 2 time-proved hormonal agents

production of a cervical mucus hostile to sperm motility and vitality

creation of an endometrium unreceptive to egg implantation



no unplanned pregnancies

Norinyl provides multiple action for maximum assurance of success. It does not depend on ovulation inhibition alone for contraceptive effectiveness. The mechanism of action of combined hormonal therapy results in ovulation inhibition reinforced by other protective mechanisms, including a hostile cervical mucus[1-13] and an acceleration of endometrial changes.[1-3,7-16] With Norinyl, no unplanned pregnancies have been reported to date when used as directed.

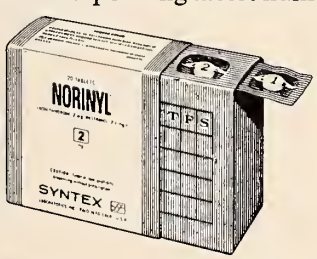
plus important supportive benefits that help her through those critical early months of oral contraception

low incidence of side effects

Low incidence of BTB and spotting, nausea and amenorrhea tends to minimize side effect problems and increases patient cooperation.

no confusion about dosage

An unbreakable "confusionproof" package makes it easy to adhere to prescribed dosage schedule: individually sealed tablets numbered from 1 through 20 *plus* monthly calendar record enables patient to double-check dosage intake by day and corresponding tablet number.



Contraindications: Thrombophlebitis or pulmonary embolism (current or past). Existing evidence does not support a causal relationship between use of Norinyl and development of thromboembolism. While a study which was conducted does not resolve definitively the possible etiologic relationship between progestational agents and intravascular clotting, it tends to confirm the findings of the Ad Hoc Advisory Committee appointed by the Food and Drug Administration to review this possibility. Cardiac, renal or hepatic dysfunction. Carcinoma of the breast or genital tract. Patients with a history of psychic depression should be carefully studied and the drug discontinued if depression recurs to marked degree. Patients with a history of cerebral vascular accident.

Warning: Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions, medication should be withdrawn.

Precautions: By May 1963, experience with norethindrone 2 mg.—mestranol 0.1 mg. had extended over 24 months. Through miscalculation, omission or error in taking the recommended dosage of Norinyl, pregnancy may result. If regular menses fail to appear and treatment schedule has not been adhered to, or if patient misses two menstrual periods, possibility of pregnancy should be resolved before resuming Norinyl. If pregnancy is established, Norinyl should be discontinued during period of gestation since virilization of the female fetus has been reported with oral use of progestational agents or estrogen. When lactation is desired, withhold Norinyl until nursing needs are established. Existing uterine fibroids may increase in size. In metabolic or endocrine disorders, careful clinical preevaluation is indicated. A few patients without evidence of hyperthyroidism had elevated serum protein-bound iodine levels, which in the light of present knowledge, does not necessarily imply hyperthyroidism. Protein-bound iodine increased following estrogen administration. Bromsulphalein retention has occurred in up to 25% of patients without evidence of hepatic dysfunction. Studies from 24-hour urine collections have shown an increase in aldosterone and 17-ketosteroids and decrease in 17-hydroxycorticoid levels. Thus, Norinyl should be discontinued prior to and during thyroid, liver or adrenal function tests. Because progestational agents may cause fluid retention, conditions such as epilepsy, migraine and asthma require careful observation. Thus far no deleterious effect on pituitary, ovarian or adrenal function has been noted; however, long-range possible effect on these and other organs must await more prolonged observation. Norinyl should be used with caution in patients with bone, renal or any disease involving calcium or phosphorus metabolism.

Side Effects: Intermenstrual bleeding; amenorrhea; symptoms resembling early pregnancy, such as nausea, breast engorgement or enlargement, chloasma and minor degree of fluid retention (if these should occur and patient has not strictly adhered to medication plan, she should be tested for pregnancy); weight gain; subjective complaints such as headache, dizziness, nervousness, irritability; in a few patients libido was increased. In a total of 3,090 patients, 2.2% discontinued medication because of nausea.

NOTE: See sections on contraindications and precautions for possible side effects on other organ systems.

Dosage and Administration: One Norinyl tablet orally for 20 days, commencing on day 5 through and including day 24 of the menstrual cycle. (Day 1 is the first day of menstrual bleeding.)

Availability: Dispensers of 20 and 60 tablets; bottles of 100.

References: 1. Council on Drugs. JAMA 187:664 (Feb. 29) 1964. 2. Bryans, F. E.: Canad Med Ass J 92:287 (Feb. 6) 1965. 3. Goldzieher, J. W.: Med Clin N Amer 48:529 (Mar.) 1964. 4. Cohen, M. R.: Paper presented at Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965. 5. Hammond, D. O.: Ibid. 6. Rice-Wray, E., Goldzieher, J. W., and Aranda-Rosell, A.: Fertil Steril 14:402 (Jul.-Aug.) 1963. 7. Goldzieher, J. W., Moses, L. E., and Ellis, L. T.: JAMA 180:359 (May 5) 1962. 8. Kempers, R. D.: GP 29:88 (Jan.) 1964. 9. Tyler, E. T.: JAMA 187:562 (Feb. 22) 1964. 10. Rudel, H. W., Martinez-Manautou, J., and Maqueo-Topete, M.: Fertil Steril 16:158 (Mar.-Apr.) 1965. 11. Flowers, C. E., Jr.: N Carolina Med J 25:139 (Apr.) 1964. 12. Goldzieher, J. W.: Appl Ther 6:503 (June) 1964. 13. The Control of Fertility. Report adopted by the Committee on Human Reproduction of the American Medical Association. JAMA 194:462 (Oct. 25) 1965. 14. Flowers, C. E., Jr.: JAMA 188:1115 (June 29) 1964. 15. Merritt, R. I.: Appl Ther 6:427 (May) 1964. 16. Newland, D. O.: Paper presented at Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965.

norethindrone—an original steroid from
SYNTEX
LABORATORIES INC., PALO ALTO, CALIF.

Norinyl® tablets
(norethindrone 2 mg. ē mestranol 0.1 mg.)

for multiple contraceptive action


only one in the morning
and one in the evening

Now
b.i.d. convenience
plus
even greater patient savings
over q.i.d. tetracycline therapy

(plus all the advantages of tetracycline phosphate complex)

new Tetrex bidCAPS™*
(tetracycline phosphate complex)

Maximum patient savings. New bidCAPS now enable you to prescribe tetracycline in an even more economical, more convenient form. Your patient's prescription dollar gets maximum value: a daily bidCAPS dose is priced lower than any other leading brand of tetracycline—b.i.d. or q.i.d.

Well tolerated. Tetrex (tetracycline phosphate complex) is well tolerated. Gastrointestinal side effects are few; photodynamic reactions are extremely rare.

More of the active antibiotic in the blood. The basic tetracycline in Tetrex (tetracycline phosphate complex) is less bound to serum protein than is demethylchlortetracycline.[1] Result: Tetrex (tetracycline phosphate complex) provides a higher percentage of active antibiotic in the blood.

Available in bottles of 16 and 50.

BRISTOL
BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York

BRISTOL THERAPEUTIC SUMMARY: For complete information consult Official Package Circular. *Indications:* Infections of respiratory, gastrointestinal and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms. *Contraindications:* The drug is contraindicated in individuals hypersensitive to tetracycline. *Warnings:* Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood). *Precautions:* Mycotic or bacterial superinfection may occur. Infants may develop increased intracranial pressure with bulging fontanels. In gonorrheal therapy, serologic tests for syphilis should be conducted initially and monthly for 3 months. *Adverse Reactions:* Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis and allergic reactions may occur. *Usual Adult Dose:* 500 mg. b.i.d. Continue therapy for 10 days in beta-hemolytic streptococcal infections. Administer one hour before or two hours after meals.

Reference: 1. Roberts, C. E., Jr.; Perry, D. M.; Kuharic, H. A., and Kirby, W. M. M.: A. M. A. Arch. Int. Med. 107:204 (Feb.) 1961.

Each bidCAP contains: Tetrex (tetracycline phosphate complex equivolent to 500 mg. tetracycline HCl activity).

PRINCIPLES OF MEDICAL ETHICS

Preamble. — These principles are intended to aid physicians individually and collectively in maintaining a high level of ethical conduct. They are not laws but standards by which a physician may determine the propriety of his conduct in his relationship with patients, with colleagues, with members of allied professions, and with the public.

Section 1. — The principal objective of the medical profession is to render service to humanity with full respect for the dignity of man. Physicians should merit the confidence of patients entrusted to their care, rendering to each a full-measure of service and devotion.

Section 2. — Physicians should strive continually to improve medical knowledge and skill, and should make available to their patients and colleagues the benefits of their professional attainments.

Section 3. — A physician should practice a method of healing founded on a scientific basis; and he should not voluntarily associate professionally with anyone who violates this principle.

Section 4. — The medical profession should safeguard the public and itself against physicians deficient in moral character or professional competence. Physicians should observe all laws, uphold the dignity and honor of the profession and accept its self-imposed disciplines. They should expose, without hesitation, illegal or unethical conduct of fellow members of the profession.

Section 5. — A physician may choose whom he will serve. In an emergency, however, he should render service to the best of his ability. Having undertaken the care of a patient, he may not neglect him; and unless he has been discharged he may discontinue his services only after giving adequate notice. He should not solicit patients.

Section 6. — A physician should not dispose of his services under terms or conditions which tend to interfere with or impair the free and complete exercise of his medical judgment and skill or tend to cause a deterioration of the quality of medical care.

Section 7. — In the practice of medicine a physician should limit the source of his professional income to medical services actually rendered by him, or under his supervision, to his patients. His fee should be commensurate with the services rendered and the patient's ability to pay. He should neither pay nor receive a commission for referral of patients. Drugs, remedies or appliances may be dispensed or supplied by the physician provided it is in the best interests of the patient.

Section 8. — A physician should seek consultation upon request; in doubtful or difficult cases; or whenever it appears that the quality of medical service may be enhanced thereby.

Section 9. — A physician may not reveal the confidences entrusted to him in the course of medical attendance, or the deficiencies he may observe in the character of patients, unless he is required to do so by law or unless it becomes necessary in order to protect the welfare of the individual or of the community.

Section 10. — The honored ideals of the medical profession imply that the responsibilities of the physician extend not only to the individual, but also to society where these responsibilities deserve his interest and participation in activities which have the purpose of improving both the health and the well-being of the individual and the community.

PRINCIPLES OF MEDICAL ETHICS

Roland F. Schoen, M.D.

Section 5. A physician may chose whom he will serve. In an emergency, however, he should render service to the best of his ability. Having undertaken the care of a patient, he may not neglect him; and unless discharged he may discontinue his services only after giving adequate notice. He should not solicit patients.

Section 6. A physician should not dispose of his services under terms or conditions which tend to interefere with or impair the free and complete exercise of his medical judgment and skill or tend to cause a deterioration of the quality of medical care.

Pursuing the approach of a previous issue, an actual analysis of words, our interpretation of Section 5 is readily made. A verb is the key to this Section, "to choose" meaning "to select, implying a decision of the judgment and actual adoption", as opposed to synonymous words which might pertain to a wide range of discrimination, rejecting the remainder, or a choice governed by individual favor. A physician's choice is governed only in an emergency situation, and here "should" connotes an expression of moral obligation. There is no specific directive — a physician may exercise his full, mature judgment as to the recipient of his services, although his conscience is enjoined were an emergency exists.

The second sentence of Section 5 contains an implied admonition; the physician having made the sole primary judgment to undertake the treatment of an individual, that individual will be cared for to the best of the physician's ability, even though the primary decision may be regretted. Even here the best interests of the patient are foremost; care may not be discontinued unless adequate notice has been given. "To solicit" implies begging or entreating. Personal pride alone would prevent this.

Section 6 consists of but a single sentence of 43 words. Key words here are "should," "dispose," and "deterioration." The moral obligation of "should" has previously been mentioned. "To dispose" bears the implication of bargaining or the making of terms while distribution (of services) is being made. "Deterioration" implies the falling from a higher to a lower level. A physician, then, has the moral obligation to avoid either a bargain or contract which might direct the course of his medical judgment to a substandard level.

Again, this analysis has become a most pleasant exercise, but what inferences have been forthcoming! The particular use of specific words has again presented a picture, a picture of a physician as a free, unfettered individual, whose own personal judgment shall be the sole factor regulating WHOM the individual physician will treat, such treatment being dictated by personal pride and honor even under trying circumstances while his moral obligation in cases of emergency is unequivocal.

What controversies must have existed in the minds and conscience of those physicians charged with the evaluation and implementation of Public Law 89-97! What controversy must still exist as future application and implementation of this same Public Law is being planned. This Section may well become the fulcrum upon which all relative legislation may turn. It appears that a choice exists — salon or bargain basement. It is hoped that physicians, neither individually nor collectively, will never need to exercise such a choice.

New
low-cost tetracycline/antifungal therapy

for broad-spectrum activity
plus specific antifungal prophylaxis
at significant patient savings

Whenever tetracycline is indicated in these candidates for Candida:

1. diabetic patients



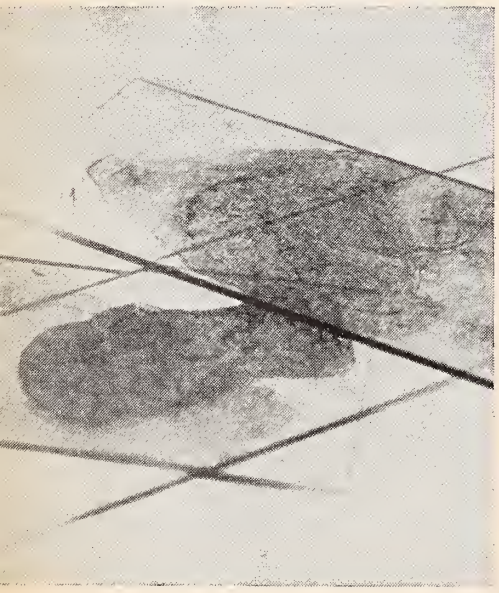
2. nonpregnant women with a history of recent or recurrent monilial vaginitis



3. elderly or debilitated patients



4. patients with a past history of moniliasis



5. patients on long-term tetracycline or corticosteroid therapy



BRISTOL THERAPEUTIC SUMMARY: For complete in formation consult Official Package Circular. *Indications* Infections of respiratory, gastrointestinal and genitourinar tracts and skin and soft tissues due to tetracycline-sensi tive organisms, in patients with increased susceptibilit to monilial infections. *Contraindications:* The drug is con traindicated in patients hypersensitive to its components *Warnings:* Photodynamic reactions have heen produced b tetracyclines. Natural and artificial sunlight should b avoided during therapy. Stop treatment if skin discomfor occurs. With renal impairment, systemic accumulation an hepatotoxicity may occur. In this situation, lower dose should he used. Tooth staining and enamel hypoplasia ma he induced during tooth development (last trimester o pregnancy, neonatal period and childhood). *Precautions* Bacterial superinfection may occur. Infants may develo increased intracranial pressure with hulging fontanels. I gonorrheal therapy, serologic tests for syphilis should b conducted initially and monthly for 3 months. *Adverse Reactions:* Glossitis, stomatitis, nausea, diarrhea, flatu lence, proctitis, vaginitis, dermatitis, and allergic reaction may occur. *Usual Adult Dosage:* 1 capsule *q.i.d.* Continu therapy for 10 days in beta-hemolytic streptococcal infec tions. Administer one hour hefore or 2 hours after meals *Supply:* Capsules, bottles of 16. Each capsule contains te racycline phosphate complex equivalent to 250 mg. tetra cycline HCl activity and 250,000 units of nystatin.

BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York

Tetrex-F®

Each capsule contains tetracycline phosphate complex equivalent to tetracycline hydrochloride 250 mg. and nystatin 250,000 units

Tetrex-F is priced lower than most tetracycline-antifungal products.

SACRIFICE



William B. McGrath, M.D.

When someone does you a favor you are naturally grateful. Yet if that person were to persist in doing nice things for you, asking nothing in return, you would soon not be able to stand the sight of him. It is an aphorism — that the over-indulged will react with irrationally destructive rejection — but it puts the emphasis in the wrong place.

The fault is not in the over-indulgence. It is that nothing is asked in return.

This is what the rebellious adolescent has been trying to tell us. ("My parents thought they could buy my love!") Do not the very best of parents sometimes seem to have the most angry and ungrateful offspring? Their children have never known deprivation or abuse. They were paid for what small chores they did. They were given every advantage. And they were expected only to be a credit to their parents. When the young people became restive or irritable they were offered even more glutting reassurances that they were beloved.

Yes, they were loved. But they never had a chance to be loving. Their wonderful instinct to devotion and sacrifice was constantly thwarted.

How trivial or wanting are the occasions in which a growing person could fulfill his yearning to be devoted, to care, to feel worthy by virtue of his kindness. The boy next door declined a tip for helping to push my car to get it started. It is disturbing and infinitely sad to look at him and realize that his idealism is starving. He has to substitute the unsatisfactory syrup of songs wherein he convinces himself that some comely maiden is desperately in need of his courage and loyalty. He can hardly identify himself with the hysterical heroes of television.

Psychologists and social workers have preached too one-sidedly about the child's need of affection. They imply that a child by being loved will become loving. No! Like any half truth this is a whole lie. The young people cannot stomach (geese being force-fed for paté de foi gras) the passive-receptive role which we have foisted on them.*

Altruism, the instinct to sacrifice, is the least understood and still the most powerful of all the instincts. Given an invitation it will supersede selfishness and sex. It will almost always supplant competitiveness and cruelty. To issue the invitation and to create conditions in which the individual can experience the thrilling goodness of sacrifice — this will require our most thoughtful concern.

*Is it analogous that emerging minority groups and adoleseent nations do not begin to riot until beneficence is offered them?



after surgery

B and C vitamins are therapy: Therapeutic amounts of B and C in stress formula vitamins often are vital during periods of physiologic stress. STRESSCAPS capsules, designed to meet increased metabolic demands, aid in achieving a more comfortable convalescence, a more rapid recovery. After surgery, as in many stress conditions, STRESSCAPS vitamins are therapy.



Stresscaps®

Stress Formula Vitamins Lederle

FOR PROFESSIONAL RECOMMENDATION ONLY

Each capsule contains:

Vitamin B_1 (Thiamine Mononitrate)	10 mg
Vitamin B_2 (Riboflavin)	10 mg
Vitamin B_6 (Pyridoxine HCl)	2 mg
Vitamin B_{12} Crystalline	4 mcgm
Vitamin C (Ascorbic Acid)	300 mg
Niacinamide	100 mg
Calcium Pantothenate	20 mg

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York

Lederle

627-6—3613

SOCIAL POLICY FOR THE NINETEEN SEVENTIES

Wilbur J. Cohen
Under Secretary of Health, Education, and Welfare

If you're interested in the skeleton for the brave new world ahead, you might like to take a look at Mr. Cohen's remarks. These were directed toward social workers and clearly outline some of the plans for medicine's future. Note: See Editor's Page 723.

We live in a troubled environment. And troubles are compounded by the problems neglected by past generations and deepened by the vast changes being made daily in our lives, our work, and our relationships to our fellow man. These problems will not vanish overnight — or even over a decade. But we have begun to deal more effectively with them in recent months. And we will do more to resolve them as time goes on.

We are encouraged by our *successes*:

- *A 30-year fight for a national health insurance program has been won.*
- *A single category of medical assistance for practically all the poor has been enacted.*
- *A regional medical program to deal with heart disease, stroke and cancer — which cause 70 percent of all deaths — has been inaugurated.*
- *Legislation to assist in staffing of community mental health centers was enacted.*
- *A 95-year struggle for Federal aid to elementary and secondary schools has been won.*
- *A teachers corps and rent supplements have been authorized.*
- *A Federal scholarship program for undergraduates was started.*
- *Federal aid for libraries has been extended.*
- *The first vocational rehabilitation amendments since 1954 have been enacted.*
- *A new immigration policy has been established.*
- *A civil rights program was enacted in 1963, and a voting rights law was passed in 1965.*
- *And we have begun to attack the root causes of poverty.*

Truly momentous measures to meet pressing national and community needs and to right many have been taken over the past five years. Only starry-eyed visionaries would have predicted six or seven years ago that all of this legislation would have been enacted by 1965.

We have witnessed an unprecedented series of legislative triumphs. But unlike Alexander, we will not weep for lack of new worlds to conquer — for the greatest *challenges* lie still ahead:

- *Our great metropolitan centers, our suburbs and small towns are suffering deep distress. Plagued by poverty, overcrowding, obsolescence, contaminated air, a shortage of water, slums, crime, segregation, and a host of other ills, all our cities have neighborhoods which are not pleasant places to live or to work.*
- *More than 30 million Americans are living in poverty in urban and rural areas — bitter observers of the growing affluence of the majority of our people.*
- *Thousands of our citizens suffer from discrimination in jobs, in schools, in hospitals and in other accommodations; they daily bear the burdens of humiliations and indignities.*
- *Even though medical research has made*

such suffering unnecessary, children on farms and in cities, in nearly every part of the Nation, still suffer the results of polio, measles, and PKU (phenylketonuria, a metabolic disorder resulting in mental retardation unless controlled through specific dietary treatment, can be detected by a simple blood test performed during a child's first week of life). And thousands suffer the results of cultural deprivation and malnutrition — also unnecessary.

- *The natural beauty of America continues to yield to the junkyard, gaudy signs, the discarded beer can, and the general clutter of an industrial society so far removed from the land that many often forget that it is the source of their strength, their wealth, and their future.*
- *Our principal waterways are open sewers, increasingly less useful to man despite our past efforts to halt the abuses of this basic natural resource.*

Fortunately, this Nation is blessed with the brains, the talent, and the wealth to find solutions to these problems.

For decades social workers and others interested in social policy have been calling attention to the social causes and effects of poverty, disease, squalor and crime. By arousing public sentiment and promoting social action, they contributed to the acceptance of public responsibility for meeting these problems.

The anti-poverty program enacted in 1964 has brought into the full public spotlight the problems of poverty, deprivation, and disadvantage, which the social work profession has been combating for decades. Poverty and dependency are now prime concerns of people in the power structure. The problems are openly discussed in the public media and debated in congressional circles.

While our population is increasing by about 2.5 million a year, our Gross National Product has been moving upward at a rate of $35 to $50 billion a year. Within a decade our Gross National Product will exceed $1,000 billion a year! We will be the first Nation in the history of the world to reach this peak of national affluence.

WHAT WILL WE DO WITH OUR ABUNDANCE?

OUT OF POVERTY

- *For one thing, we must — and we will — reduce the numbers of those living in poverty. If we accelerate the efforts already begun, the United States can be the first Nation in the world to abolish poverty. And I believe we will do just this in the next decade. We have reduced the extent of poverty from 40 percent of our population in the early nineteen-thirties to less than 20 percent in the mid-sixties. We can bring it down to less than 10 percent by the mid-seventies and virtually eliminate it in the following decade.*
- *The social security system is one of the important means that has been used to reduce poverty. But it needs to be strengthened and expanded. We can — and I believe we will — automatically adjust social security benefits to increases in earnings and to any increases in the cost of living.*
- *By new and ingenious provisions in our private enterprise, social security, and tax systems, the private and public sectors will be able to assure a minimum income to all who work, and to all those who are too sick or disabled or too old or too young to work. You may call these devices a "guaranteed income," an "annual wage," the "negative income tax," or a number of other names.*
- *Adequate housing for families at every income level will be made available and open to all, regardless of race or ethnic background.*
- *We can — and I believe eventually we will — eliminate the terms "welfare," "relief," and "categories" from our governmental programs. The State public welfare agencies will become Departments of Social Services or Departments of Individual and Family Services. They will include homemaker services, foster homes and day care for children, and family home care for adults among a wide and varied range of social services, which will be available to every person in the community who chooses to use them.*
- *Instead of some sixty graduate schools of social work, there will be over one hundred such schools; and the number of graduates will have tripled.*
- *Cooperation and coordination among agencies, public and private, will enable the people to get the services they need in or near the neighborhoods where they live.*

There will be more neighborhood centers for health and social services. There will be many more communities with group practice plans, which will deliver high quality medical services.

HEALTH

- *Every expectant mother will be assured access to high quality prenatal and postnatal care. And this care will reduce the number of premature and mentally retarded babies.*
- *We shall have reduced the extent of congenital blindness and deafness.*
- *The scourge of many communicable diseases including smallpox, diphtheria, whooping cough, measules and polio will be all but eliminated.*
- *Tuberculosis, with its greatest toll among the poor and ill-housed, will be cut by three-fifths.*
- *The virtual eradication of syphilis will have been achieved.*
- *We will bring within the reach of every individual the artificial heart, the artificial kidney, and transplanting of vital organs which will conserve the lives of many who today die prematurely.*
- *We will have wiped out the morbidity and mortality differentials which now exist between white and nonwhite persons.*
- *Life expectancy at birth will increase from 70 years at present to 71 years by 1970, to 72 by 1975, and to 73 by 1980. And I believe we may eventually find the means to increase life expectancy to 75 years if we can find the cures for leukemia and other forms of cancer, reduce deaths due to heart disease and stroke, and reduce infant mortality.*
- *The organization and delivery of medical services will also be changed as we go along. Much better use must be made of trained professional manpower by delegating the nonprofessional aspects of their jobs to subprofessional aides.*
- *Through both private and public sources we must strengthen and expand training and scholarship programs to produce additional numbers of physicians, dentists, nurses, teachers, social workers, and medical technicians needed to provide new and more services, some of which will be startlingly different from the services available today.*
- *We will have increased the number of medical schools from 86 to over 125, and we will have expanded the number of their graduates.*
- *Nurses will be earning higher salaries and there will be more of them so that some of the shortages which exist today will be much less acute.*
- *And the miracles of modern medicine will be available to all, through private and public insurance arrangements, irregardless of race, or color, incomes or any other factor considered a medical necessity. Insurance will cover practically all major medical costs for virtually the entire population.*
- *State health and welfare departments will be working closely with voluntary agencies in providing people with access, on a voluntary basis, to family planning services, which will stress family responsibilities.*
- *These agencies will also be cooperating to provide homemaker and visiting nurse services to every family requiring such services, thus reducing the need for hospital and institutional care.*
- *A worldwide health campaign will eradicate other diseases, such as smallpox, malaria, and cholera, from most places on the face of this planet.*

EDUCATION

- *The continuing increased investment in education growing out of recent legislation will bring about a sharp reduction in the number of those who are educationally disadvantaged. Currently, 1 million students drop out of high school every year.*
- *Their unemployment rate is 27 percent, compared with 13 percent for those who complete high school. Reducing this rate one-third by 1970 and cutting it in half by 1975, will mean 3 million fewer school dropouts over the next ten years.*
- *School segregation, whether effected by open discrimination, gerrymandered school districts or ghetto housing, will have crumbled before the combined forces of legal barriers to official segregation, open housing policies, urban development, metropolitan planning, increased employment opportunities, and not least of all, the moral force of enlightened public opinion.*
- *In the next few years we will accelerate the*

expansion of educational opportunities for Negro students and other minority groups. This should make it possible by 1975 for every high school graduate to have the actual equivalent of a first rate high school education. As it is now, many complete 12 years of schooling in inferior schools and emerge with the equivalent of perhaps a seventh grade education. Such a result will become a relic of the past.

- *We will have moved from 12 years of free public education to 15 years of free public education — kindergartens in every elementary school and junior colleges in every sizeable community.*
- *By the mid-1970's there probably will be close to ten million young men and women in post-secondary and higher education — in colleges, universities, junior colleges, and technical institutes.*
- *Scholarships and loans will be available so that lack of finances will not keep any able boy or girl from completing college.*
- *The quality of education will be vastly improved at every level. School curriculums will be enriched through cooperative programs with colleges, museums, libraries, public and private cultural and educational agencies and groups. The thousands of elementary and secondary schools without library books today will have them in ample supply for every student.*
- *And trained guidance and counseling personnel will be available in every school to help our boys and girls find their way into stimulating and creative activities of significance and value.*
- *Supplementary educational centers will provide special programs for both the academically gifted and the handicapped, and will furnish other resources not available in the typical school.*
- *Educational television will have developed and expanded all over the Nation with an adequate educational television system in every State. Tomorrow's television audiences will have a real choice of stimulating high-grade shows of artistic merit, creativity, and educational distinction.*
- *There will be specialists in every school to identify the emotionally disturbed child at an early stage, thus helping to prevent the Lee Oswalds of the future.*

REHABILITATION OF THE HANDICAPPED

- *A wide range of services will be available to the mentally retarded and mentally ill and their families to help them obtain the medical, educational, employment and recreational services needed.*
- *We will rehabilitate for gainful employment 300,000 persons a year, instead of the 125,000 rehabilitated last year. Many handicapped people — including the mentally retarded, those afflicted with epilepsy, and those who have undergone a period of mental illness — will be helped to become employed and to take a place in their families and communities far beyond what is done today.*

And with all of this will come a further expansion of the private sector of our economy. There will be more private health plans, more nongovernmental hospitals and nursing homes, more private physicians, dentists, and nurses, and more local home health service agencies. There will be more local community colleges, and small private colleges will be strengthened and upgraded. There will be more private pension plans and a greater degree of home ownership. There will be more private life insurance in force and larger private savings.

What I am suggesting is that we must strive for a social structure that is at once more diversified and more interdependent — a more truly pluralistic society. All in all, there will be more choices for every individual — an awesome responsibility, requiring a great degree of education and self-discipline. Diversity and interdependence must be buttressed by intelligent cooperation between business and government, and more effective governmental cooperation among the local, State, and Federal levels.

I believe that the final outcome of America's growing affluence, of our great investments in health, education, in social security and social services, will be to offer each individual a *greater freedom of choice of what he may do with his life.* And this is a freedom of choice that must extend to all of our people throughout their lives and give greater meaning to their lives. Our society must be truly open. No longer will a person have a restriction on his opportunity for education and training, or on his occupational choice because he is a member of a minority group — or because of sex, race, or place of

birth, or residence.

The freedom to choose the size and spacing of one's family must become a reality for the poor as well as for the affluent. And this choice has important implications in terms of maternal health, infant mortality, dependency, and education and training of women. With childbearing and childrearing completed by many women while they still have many active years of life ahead, the possibilities of their resuming interrupted careers or of beginning new ones, or of contributing to meaningful volunteer activities provides them with a new dimension of choice for their lives.

Increased freedom of choice will contribute to and be reinforced by strengthening the role of the family, a strengthening of parental responsibility, continuing education, and civic obligations.

Schools and colleges will be open evenings and weekends to serve the diversified and creative needs of the whole community. Every family will have access to good books and music, more exposure to and time for the arts and the theater. A wide range of new opportunities and programs — from Head Start to the new National Foundation on the Arts and Humanities — must furnish the tools to overcome the cultural deprivation that today blights lives in millions of American homes in rural and urban slums.

The older person will not be put on the shelf at age 60, 62, 65, or at any arbitrary age. Just as our affluence will become better distributed, so also will leisure and opportunity to enjoy it be distributed over a whole lifetime. The concept of sabbatical leave periodically to enable workers to go back to school or to travel could become a reality in our lifetimes. This will become an accepted practice of private business, educational institutions and government. Older workers will have the opportunity of tapering off work in later years by continuing part-time or part-year employment without an arbitrary age limit; this is one answer to making increasing longevity more meaningful.

And to emphasize the point again: this freedom of choice must be available to all. It must embrace those sometimes forgotten people that social workers have been serving so faithfully these many years with inadequate resources in money and personnel. Making this freedom of choice a reality is truly the challenge that we face in the decade ahead.

Some will call the picture I have painted a visionary one. Others may say it is a real possibility but question the effect it will have on incentives and initiative, on work and morals. And it is true that even if the goals I have outlined were attained, all the problems that exist today would not be eliminated, not to mention those that may arise in the future.

One fact is certain: as long as there are human beings, there will also be problems. I do not doubt that we will continue to face difficulties. The threat of war and the conflicts with ideologies will probably still be with us for a long time.

The problems we face call for an educated and *adaptable society* and a *growing, dynamic, healthy economy.* We are presented with a challenge and with great oppotrunities.

I believe that now is a wonderful time to be alive, to work, to think, to write, to speak, and to seek and strive for new and imaginative ways to make a new and better world.

- *I do not subscribe to the pessimism of those who say there are no new worlds to conquer.*
- *I do not subscribe to the pessimism of those who have joined extremist groups because they have uost faith in people, in America, in experimentation, in the future.*

As the philosophy underlying the big changes ahead of us has come to be articulated through discussion and interpreted through recent legislation, the concept of the Great Society has emerged as one of the great social and political thrusts of our Nation's history. As I see it, this concept represents a forward movement, from a legalistic view of political and civil rights to a broader, more dynamic concept of human opportunity. Again and again, the President has expressed his belief that every child should have the opportunity to get as much education as he can handle, that poverty must be abolished, that health care must be available to all regardless of income or social level. These are goals and purposes that are at the very heart of the concerns of social policy.

Like all great ideas, this notion of opportunity and choice is as yet only imperfectly realized in our institutions and in our social structure. But the foundations have been laid and the great testing ground lies ahead of us in the coming years. So we go forward with renewed determination to set and to reach new goals for our great Nation.

new

"Doctor, when the kids act up and nothing goes right, I get these throbbing pains in the back of my head."

a new formulation that relieves pain in tension headache and neuralgia

Dialog is a combination of 15 mg allobarbital and 300 mg acetaminophen. Allobarbital, a proven barbiturate, provides desirable sedation in patients experiencing pain and discomfort. Acetaminophen is a nonsalicylate analgesic-antipyretic, well tolerate and useful in a wide range of mildly painful and febrile conditions.

Dialog is well tolerated, even by those sensitive to aspirin. It is nonirritating to the gastrointestinal tract and, in recommended dosage, has no adverse effect on the kidneys.

- Raises the pain threshold
- Suppresses the pain-producing mechanism
- Reduces emotional tension

2/3453 MK-3



Dialog™

(allobarbital and acetaminophen CIBA)

Indications: For relief of pain and discomfort of simple headache; neuralgia, myalgia, and musculoskeletal pain; dysmenorrhea; bursitis; sinusitis; fibrositis. Also indicated to reduce fever and to relieve discomfort due to respiratory infections, influenza, and other febrile conditions.

Contraindication: Not recommended during pregnancy.

Caution: May be habit-forming. Do not use in patients sensitive to barbiturates or in those with moderate to severe hepatic disease.

Side Effects: Nausea, transitory dizziness, rash. Overdosage of allobarbital produces symptoms typical of acute barbiturate excess.

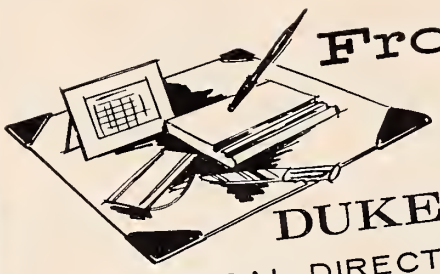
Dosage: *Adults:* 1 or 2 tablets every 4 hours. Not to exceed 8 tablets in 24 hours. *Children 6 to 12:* ½ to 1 tablet every 4 hours. Not to exceed 4 tablets in 24 hours.

Supplied: *Tablets* (white, scored), each containing 15 mg allobarbital and 300 mg acetaminophen; units of 3 bottles of 30.

For your convenience – prescription-size bottle of 30.

CIBA Pharmaceutical Company, Summit, N.J.

CIBA



From The Desk Of

DUKE GASKINS, M.D.

MEDICAL DIRECTOR, HBA LIFE INSURANCE CO.

Doctor:

There's no paper blizzard at HBA.

If you're like me, you got enough paper work in med school to last a lifetime.

But let's face it. The tempo of the times, and specialization in our own profession, has made the written word a fact of life.

In only 5 out of 100 claims it is necessary for HBA to bother the doctor for additional information on a patient. You'll find the forms simple and straightforward.

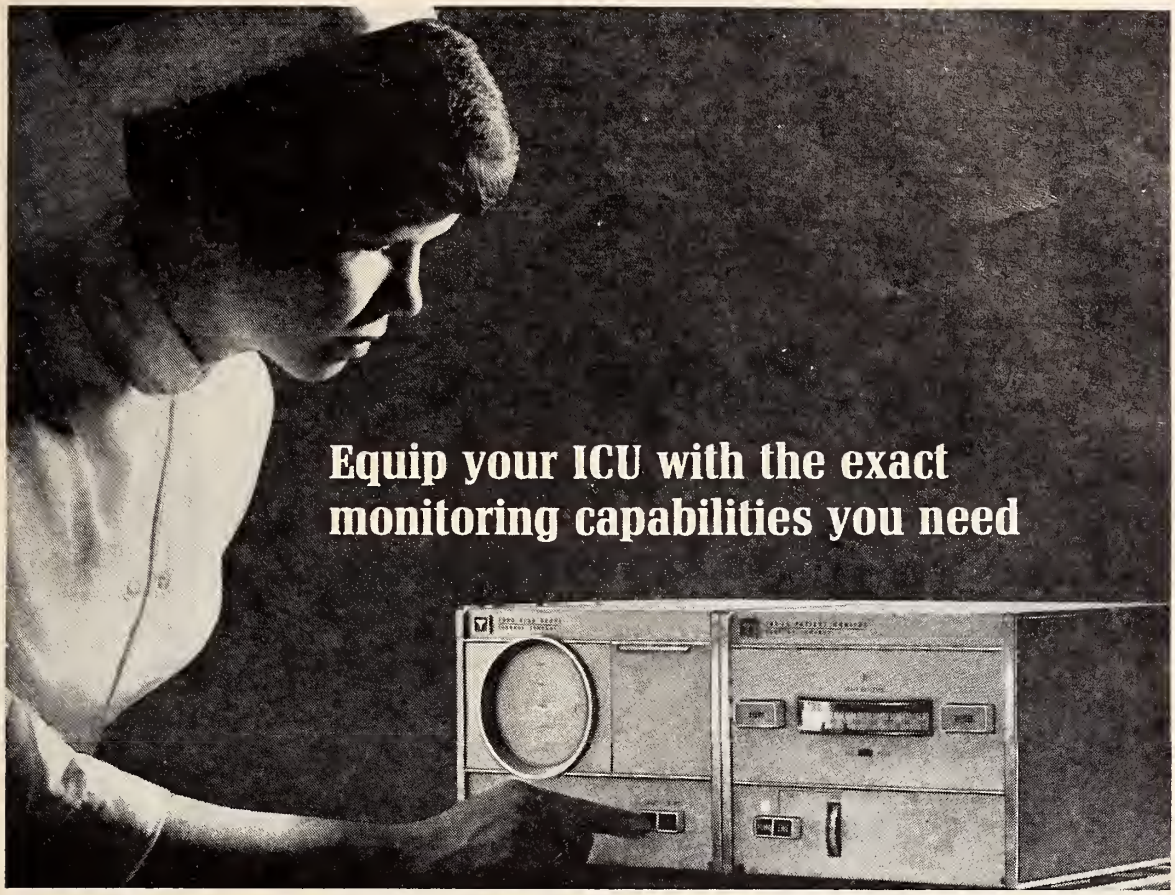
Figure when your patient asks you to complete an HBA form, we needed it! We'll appreciate your promptness in returning the completed form.

Duke

THE HBA LIFE

INSURANCE COMPANY

GROWING WITH THE ELEVEN WESTERN STATES



Equip your ICU with the exact monitoring capabilities you need

You can have a system "tailored" to your needs — *using standard HP Sanborn monitoring modules* — whether it involves a few conditions for a few patients . . . or many patient conditions, eight or more beds, and complete central station alarm/display/recording facilities. Start with 780-series modules for monitoring the ECG and heart rate, for example (shown above), and as needs and budget enlarge, add "780" modules to monitor more functions, more patients or both. (Illustration below shows the addition of temperature, respiration rate, systolic and diastolic pressure monitoring functions, plus pacemaker, to the original two functions.) System suitability, economy, future functional and location adaptability, and rapid staff training are the continuing benefits of modular "780" systems.

Specific capabilities of these units, in addition to those mentioned, include venous pressure monitoring . . . internal/external DC defibrillation . . . and continuous ECG recording on endless loop magnetic tape units, with automatic readout on alarm of data immediately preceding distress condition. Wall Mount Brackets are available to free space around beds, or two styles of "780" carts give complete instrumentation mobility. For Central Station use, a wide choice of units is available for visual display, audible alarm, signal switching, graphic and tape recording.

When complete cardiac function monitoring is needed, with automatic ECG recording at selected intervals or on distress, the 780B Viso-Monitor provides it in a single bedside unit. Indicators display heart rate, QRS event, bradycardia, tachycardia, pulse loss and arrest; internal/external pacemaker is built in. Companion unit supplies visual display and audible alarm of all conditions monitored by the Viso-Monitor.

HP/Sanborn field offices can give you valuable help in system planning, installation and staff training — and provide continuing, local service. For details, send the coupon to Hewlett-Packard Company, Sanborn Division, Waltham, Mass. 02154. In Europe, H.P.S.A., 54 Route des Acacias, Geneva.



HEWLETT PACKARD hp SANBORN DIVISION

Measuring for Medicine and the Life Sciences

0-740

Send detailed data on Sanborn 780 Series Patient Monitoring Systems to:

(name) (hospital)

(address)

(city) (state) (zip code)


And now..
PANACEA

r all you cold sufferers who've been looking for a cure-all.

ey can't cure a cold. We can't cure a cold. You can't cure a cold. But what you can do is relieve the symptoms, king the patient comfortable and the cold bearable.

e patient suffering from head cold congestion, for instance, should breathe easier when you prescribe vahistine LP.

vahistine LP is a long-acting decongestant that helps restore normal mucus secretion and ciliary activity—physi-gic mechanisms which prevent infection of the respiratory tract. Two tablets in the morning and two in the evening l provide around-the-clock relief by helping to keep congested air passages clear, thus enabling your cold patient enjoy normal and free breathing.

e cautiously in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Tell tients who operate machinery or motor vehicles t drowsiness may result.

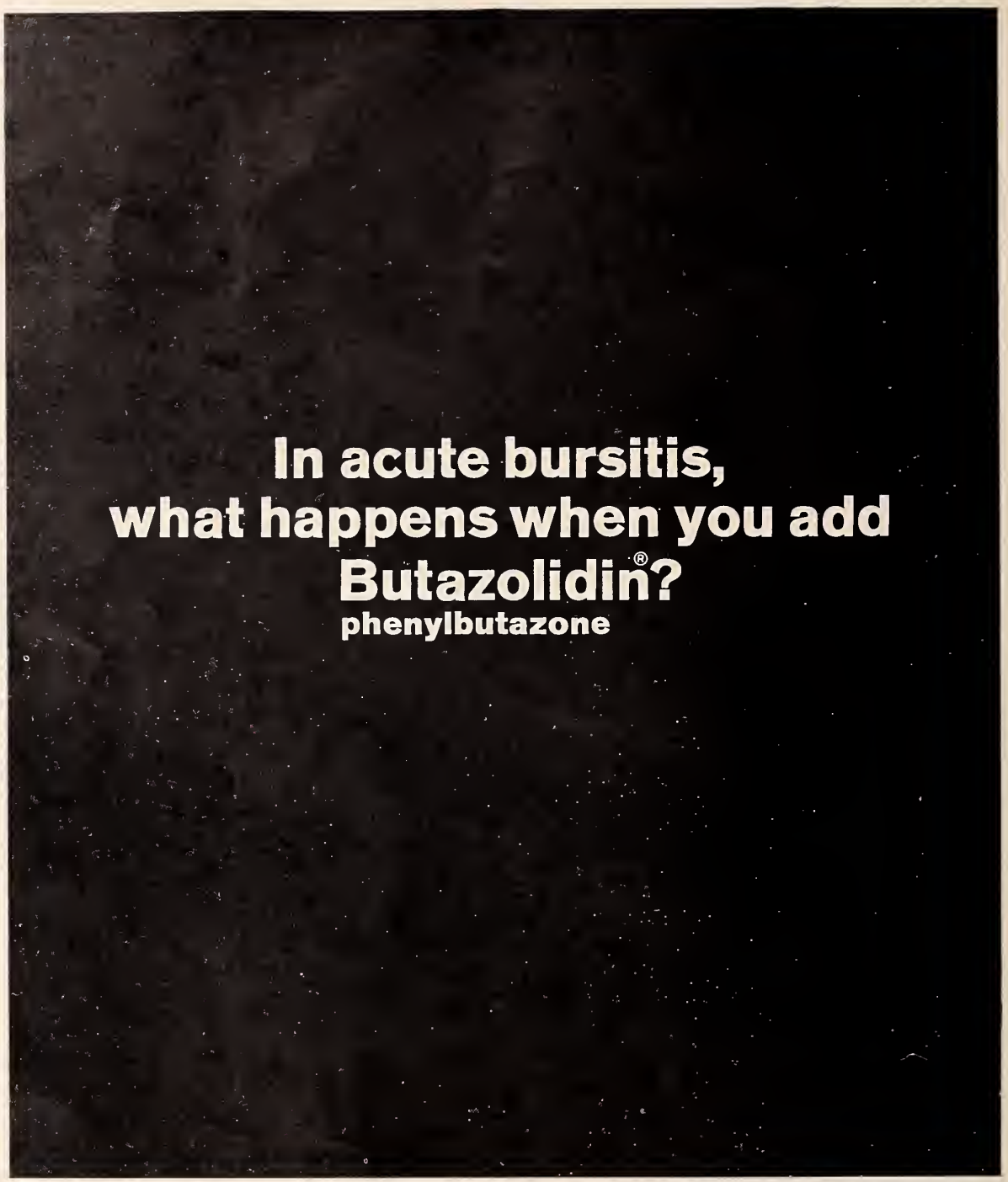
ch Novahistine LP tablet contains: phenyle-rine hydrochloride, 25 mg., and chlorpheniramine leate, 4 mg.

NOVAHISTINE® LP

For relief of nasal congestion.

RMAN-MOORE
sion of The Dow Chemical Company, Indianapolis, U.S.A.



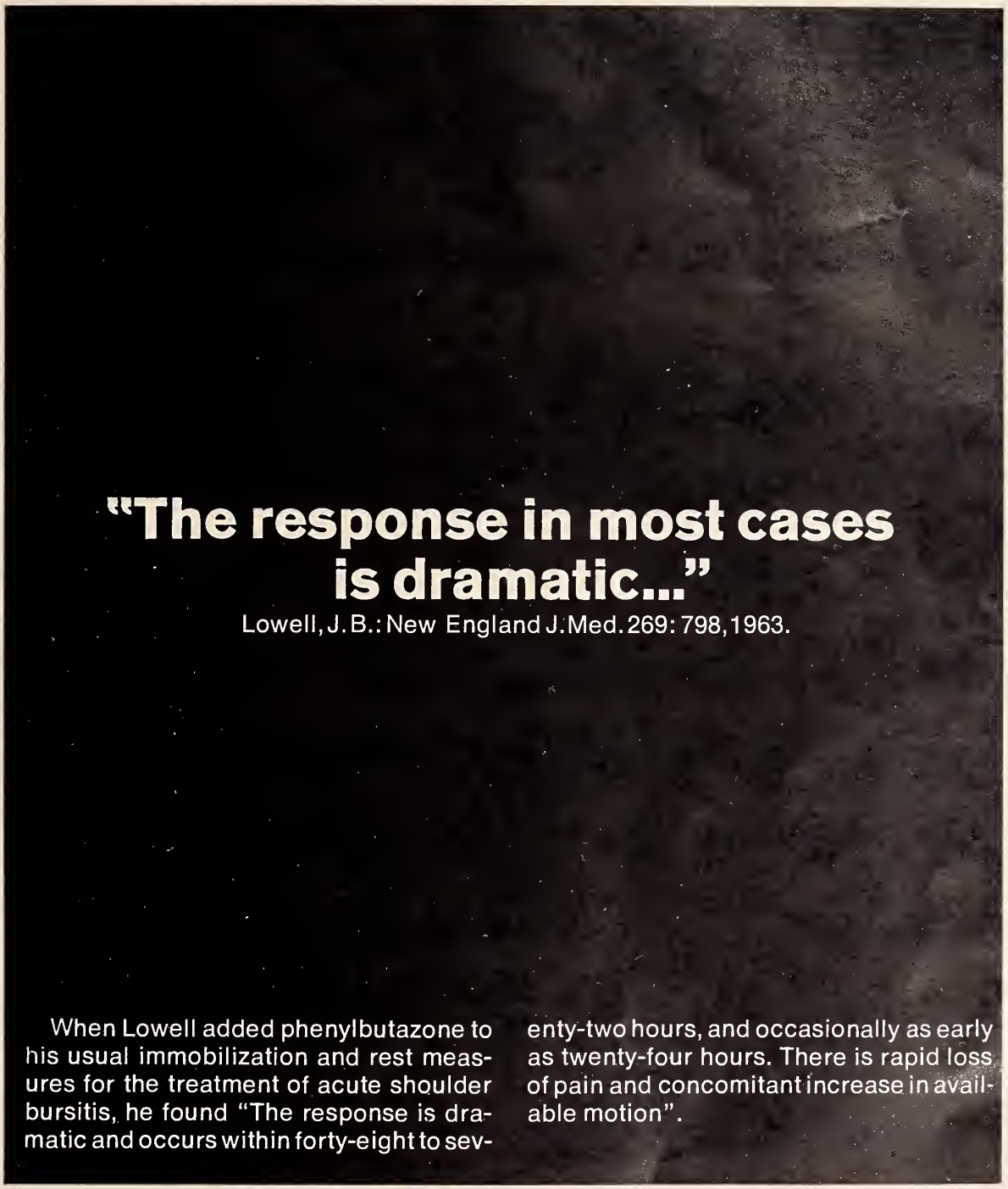


Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. Because of the increased possibility of toxic reactions, the drug should be used with greater care in the elderly and should not be given when the patient is senile or when other potent chemotherapeutic agents are given concurrently. Large doses of Butazolidin alka are contraindicated in patients with glaucoma.

Warning: If coumarin-type anticoagulants are given simultaneously, the physician should watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Patients receiving such concomitant therapy should be carefully observed for this effect. Use with caution in the first trimester of pregnancy.

Precautions: Before prescribing, the physician should obtain a detailed history and perform a complete physical and laboratory examination, including a blood count. The patient should be kept under close supervision and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools. Regular blood counts should be made to guard against blood dyscrasias.

Adverse Reactions: The most common adverse reactions are nausea, edema and drug rash. Moderately lowered red cell count may sometimes occur due to hemodilution. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. Infre-



quently, agranulocytosis, exfoliative dermatitis, Stevens-Johnson syndrome or a generalized allergic reaction may occur and require withdrawal of medication. Stomatitis, salivary gland enlargement, vertigo or languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia are also possible side effects.

Confusional states, hyperglycemia, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hepatitis, jaundice and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently.

Average Dosage: Initially, give 400 mg. daily (one tablet or capsule q.i.d.), reducing this, if possible, when a favorable therapeutic effect has been obtained. If after one week there has been no response, discontinue the drug.

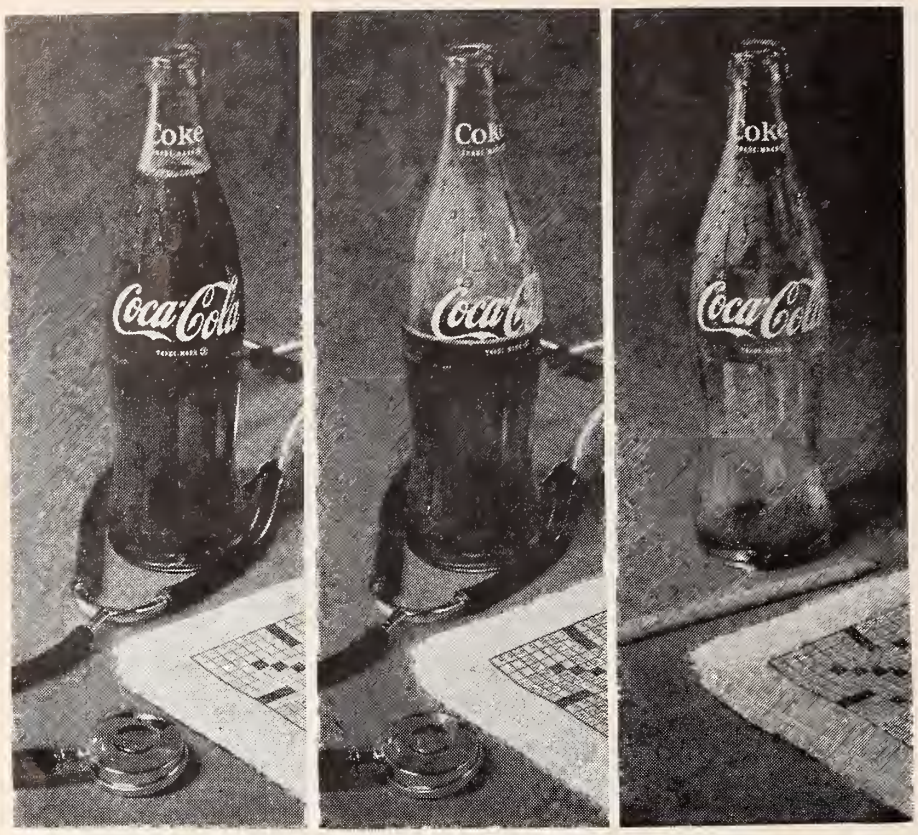
For complete details, please refer to full prescribing information. 6509-V(B)

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York

BU-4513

Butazolidin® alka Geigy

Each capsule contains: Butazolidin®, phenylbutazone, 100 mg.; dried aluminum hydroxide gel, 100 mg.; magnesium trisilicate, 150 mg.; homatropine methylbromide, 1.25 mg.



The meaningful pause. The energy it gives. The bright little lift. Coca-Cola with its never too sweet taste, refreshes best. Helps people meet the stress of the busy hours. This is why we say **things go better with Coke**
TRADE-MARK ®

Medical Center X-Ray and Clinical Laboratory

1313 North 2nd Street
Phoenix, Arizona
Phone ALpine 8-3484

DIAGNOSTIC X-RAY

CLINICAL PATHOLOGY **TISSUE PATHOLOGY**

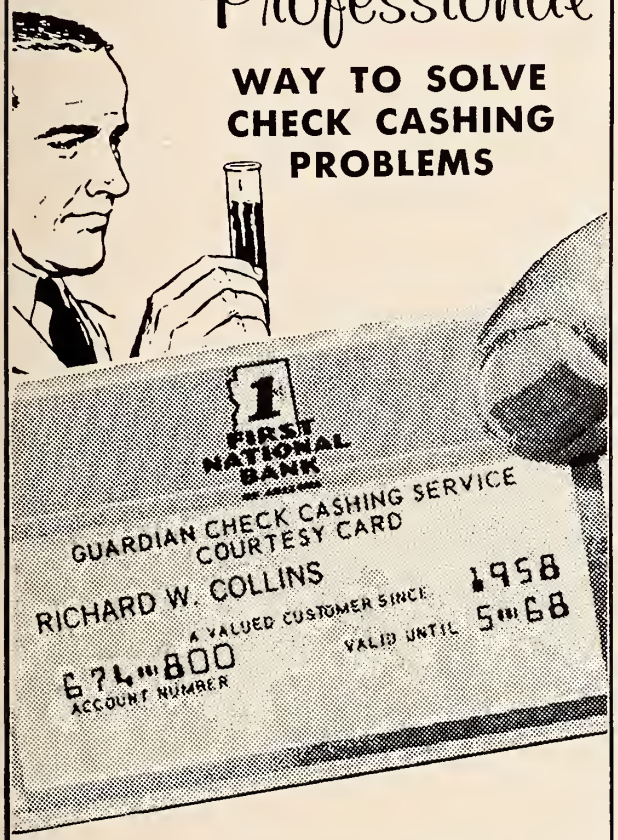
ELECTROCARDIOGRAPHY **BASAL METABOLISM**

R. Lee Foster, M.D., F.A.C.R., F.A.C.P., Director *Martin L. List, M.D., Radiologist*

Diplomates of American Board of Radiology

Lorel A. Stapley, M.D., Consultant Pathologist

THE
Professional
WAY TO SOLVE
CHECK CASHING
PROBLEMS



First National Bank's
GUARDIAN CHECK CASHING SERVICE

Professional people recognize Guardian Check Cashing Service as a sound basis for check cashing convenience.

Over 140,000 First National customers use their Guardian Courtesy Cards when they present their checks, **assured for payment,** up to $100.

For both customer and businessman, check cashing is on a sound, convenient basis with First National Bank.

If you would like this exclusive service, apply at your nearest office of First National Bank.

1st
FIRST
NATIONAL
BANK
OF ARIZONA
MEMBER F.D.I.C. • FEDERAL RESERVE SYSTEM

8/14/66

President
Arizona State Medical Association, Inc.
P. O. Box 128
Scottsdale, Arizona

Dear Sir:

I am writing this letter to extend to you and the other members of the Arizona State Medical Association my most sincere thanks for granting to me a loan of one thousand dollars with which to finance the first year of my medical education. I am sure that you are quite familiar with the problems involved in financing a medical education today, and therefore I am equally sure that you will believe me when I tell you that the loan was vital to me. Upon beginning my career in the profession of medicine, I am convinced that a medical doctor must be a man of high ideals, and I want you to know that the example which you and the other members of the association have shown in establishing the loan-scholarship program has only served to strengthen that conviction. Thanking you all again for your interest and assistance in my endeavor to become a medical doctor, I am

Very truly yours,
Cyril James Statt

ANNOUNCEMENT

KDOT Radio — 1440 on your dial — cordially invites the doctors to tune in each Sunday at 12:00 Noon for the broadcasting of MEDICAL MILESTONES, a public service presentation of the American Medical Association.

The time allotted for these colorful vignettes of the Doctors' role in the conquest of human ills is made possible by Warner L. Blackburn, of the Collection Service Bureau, Scottsdale, Arizona.

Blood-glucose screening for all your patients?

...because "Abnormalities of glucose metabolism are among the [most common] encountered in clinical practice...."* Simple, quick, economical blood-glucose screening with DEXTROSTIX® Reagent Strips is practicable in every regular physical examination, emergency situation, and whenever hypo- or hyperglycemia may be of clinical significance—for "The precision and accuracy of DEXTROSTIX ...meet the need for an always available simple screening method...."* All that is required for screening with DEXTROSTIX is 60 seconds and a globular drop of capillary or venous blood. Abnormal readings will be a valuable aid to diagnosis; normals will help you establish an important baseline for future reference.

*Marks, V., and Dawson, A.: Brit. M. J. *1*:293, 1965.



DEXTROSTIX—
provides a clinically useful determination when performed according to directions†

†DEXTROSTIX is not intended to replace the more precise analytical laboratory methods.

Yes—all your patients

AMES COMPANY, INC.
Elkhart, Indiana

09165

The discomforts of

DIARRHEA
MUCOUS COLITIS
DIVERTICULITIS
SPASTIC URETERITIS
BLADDER SPASM

are relieved by direct musculotropic action with.....

Trocinate®

BRAND THIPHENAMIL HCl

Available in 100 milligram pink sugar-coated tablets.

The high therapeutic index permits dosage sufficient to relieve spasm promptly.

Administer 4 tablets every 4 hours until relief is constant, then adjust maintenance dosage.

Trocinate *BRAND* THIPHENAMIL HCl

Directly relaxes smooth muscle spasm
Combats hypermotility
Non-mydriatic, may be used in glaucoma

Sixteen years of clinical use, with absence of untoward effects, has established the safety and effectiveness of Trocinate.

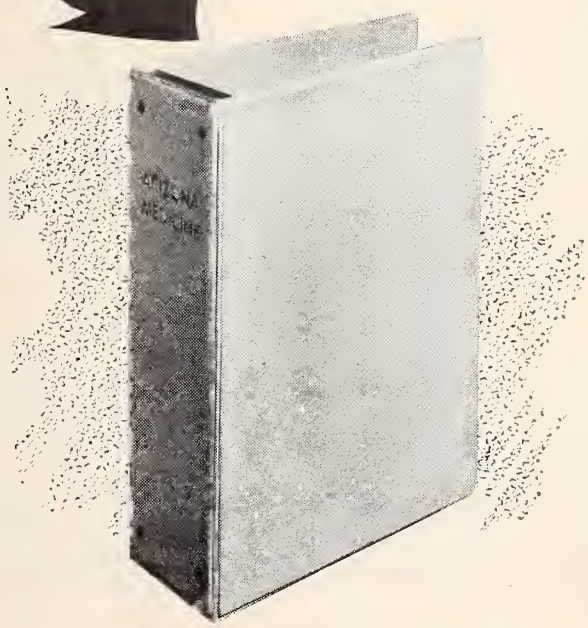
Trocinate is metabolized in the body and completely eliminated, which is a safety factor. Dosage must be sufficient to maintain the therapeutic blood level.

DISPENSED IN BOTTLES OF
100, 250 AND 2000 TABLETS

Literature and samples sent upon request

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA
Manufacturers of ethical pharmaceuticals since 1856

FOR YOUR PERMANENT FILE



HANDSOME, DURABLE WHITE & GOLD VINYL COVERED BINDERS TO PRESERVE PAST ISSUES OF ARIZONA MEDICINE. EACH BINDER HOLDS UP TO TWELVE ISSUES.

ONLY $3.00 EACH

Arizona Medicine

p.o. box 128 scottsdale, arizona 85252

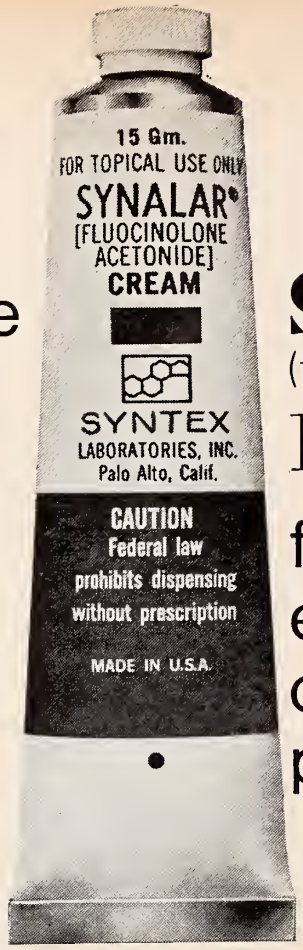
Name _____

Address _____

PLEASE SEND _____ BINDERS

I understand that these will be billed to me at the rate of $3.00 each.

new small size



Synalar® 0.01
(fluocinolone acetonide) **cream**

15 Gm.

for even greater economy in office or hospital practice

the superiority
topica
with the

Now you can prescribe as little or as much Synalar Cream 0.01% as is needed for a particular therapeutic problem in a size that permits the greatest economy for your patient. The new 15 Gm. tube, for example, is best suited for short-term therapy and for small sites. For more extensive body areas prescribe the 45 Gm. tube—a size that's also ideal for your treatment table. And the 120 Gm. jar is most economical for hospital use. Thus, with Synalar Cream 0.01%, you have the superiority of a modern topical corticosteroid shown to be more effective than 1% hydrocortisone[1-3] plus the economy that makes therapy practical for use in more dermatologic conditions, in long-term maintenance, with occlusive dressings in resistant cases, and in extensive area involvement.

Contraindications: Tuberculous, fungal, and most viral lesions of the skin (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use. Contraindicated in individuals with a history of hypersensitivity to any of its components. **Precautions:** 1. *General*—Synalar Cream 0.01% is virtually nonsensitizing and nonirritating. Where severe local infection or systemic infection exists, the use of systemic antibiotics should be considered, based on susceptibility testing. While topical steroids have not been reported to have an adverse effect on pregnancy, the safety of their use on preg females has not absolutely been established. Therefore, they should n used extensively on pregnant patients, in large amounts, or for prolo periods of time. 2. *Occlusive dressing method*—With occlusion of exter areas, systemic absorption of the corticosteroid may occur, and suit precautions should be taken. Occasional patients may show contact s tivity to a particular dressing material or adhesive. Miliaria, folliculiti pyodermas have been seen infrequently with the use of this technique. development of infection requires appropriate antibacterial therapy an continuation of the occlusive dressing method. Local atrophy and s have been reported with protracted occlusive dressing therapy. While le relapses can be expected to occur in many psoriatic patients, remiss may persist for several weeks to several months in favorable cases. patient whose psoriasis is in an active stage, with recent appearance of lesions, may not be a good candidate and may show early relapse. S plastic films may be flammable, and due care should be exercised in use. Similarly, caution should be employed when such films are used c left near children to avoid the possibility of accidental suffocation. **Effects:** Side effects are not ordinarily encountered with topically ap corticosteroids. As with all drugs, however, a few patients may react vorably to Synalar under certain conditions. **References:** 1. Cahn, M. M. Levy, E. J.: J New Drugs 1:262 (Nov.-Dec.) 1961. 2. Meenan, F. O.: J Med Ass 52:75 (Mar.) 1963. 3. Robinson, H. M., Jr., Raskin, J., and Duns W. J. R.: Southern Med J 56:797 (Jul.) 1963.

of a modern corticosteroid economy of hydrocortisone

Now...a choice of 3 economical sizes



120 Gm. jar



15 Gm. tube

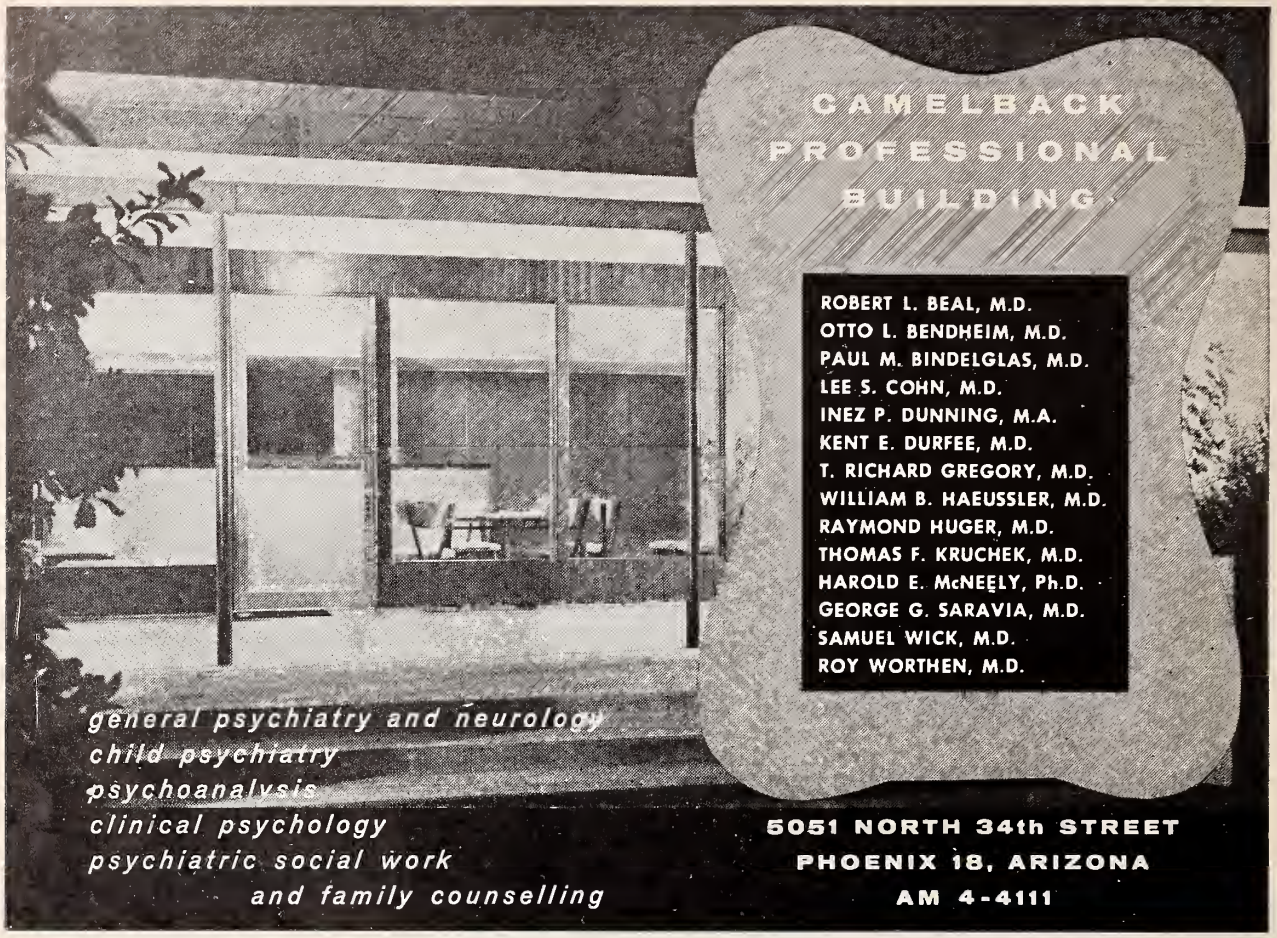


45 Gm. tube

fluocinolone acetonide — an original steroid from

SYNTEX

LABORATORIES INC., PALO ALTO, CALIF.



THE DIAGNOSTIC LABORATORY

Complete Medical Laboratory Service, X-Ray Diagnosis
Radiation Therapy, Radioactive Isotopes



PATHOLOGISTS
Maurice Rosenthal, M.D.
George Scharf, M.D.
Seymour B. Silverman, M.D.
Bland Giddings, M.D.
Sidney H. Zuber, M.D.

RADIOLOGISTS
1130 E. McDowell Office — 258-1601
Marcy L. Sussman, M.D.
1901 E. Thomas Road Office — 274-3603
Edward L. Batts, M.D.
William S. Stone, M.D.
George A. Gentner, M.D.

Diplomates of the American Boards of PATHOLOGY and RADIOLOGY

1901 East Thomas Road • Phoenix, Arizona • Phone 264-2101

Squaw Peak Sketches

Of Pithy Pioneer Physicians

by dry gulch jake



ITEM

In response to an inquiry about Gila monster bites, Dr. Whitmore of Tucson wrote on May 14, 1906, to the Health Officer:

"The only case of Gila monster bite that has come under my observation occurred thirteen years ago when I was an assistant to Dr. Goodfellow here. The doctor had two or three of these pets in his yard. One noon while he was holding one of them in his left hand and was teasing it with his right hand, it grabbed him by the index finger of his right hand. I was at lunch. He rushed to the drug store, had the wound opened and cauterized. The symptoms were wholly local, the finger giving him some trouble for a few weeks — as I now recall.

"Some eight or ten years ago I saw, several times, with Dr. Matas, a case of hydrophobia caused by the bite of a skunk. The patient died in about a week or ten days.

"The cases of rattlesnake poisoning that I have treated have been either so mild or so long after the reception of the poison that very little was required in the way of treatment. I have not known a patient to die of rattlesnake poisoning."

ITEM

Another reply received by Dr. Duffield in response to his query about bites came from Dr. P. A. Melick from Williams, Arizona, May 1, 1905.

"Replying to your favor of the seventeenth inst., I regret to say that it has not yet been my fortune to see any living creature bitten by the Gila monster, rattle-snake, nor hydrophobia skunk, therefore, I can give you no data upon the subject. Dr. Bramen in Flagstaff may be able to furnish you with some data upon the symptoms produced by the bite of a hydrophobia skunk, as I have been informed that a man died in Flagstaff some years ago from the bite of a skunk."

John W. Kennedy, M.D.



Squaw Peak Billie
and
Dry Gulch Jake

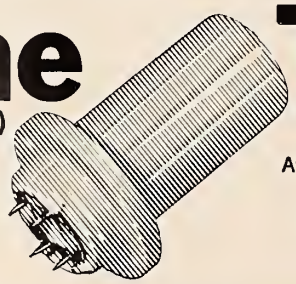
what time is it?

For the past
two years
there's been
one new case
of active tuberculosis
reported for every
four thousand
of U.S. population.

it's time to tine.

Tuberculin,

Tine (Rosenthal) Test Lederle



Available in 5's and 25's.
Order now
from your pharmacist
or your Lederle
representative.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York

414-6—4046R



e casual atmosphere

of Camelback Hospital
is one of relaxed Western living.
king east, Camelback Mountain provides the background
for the lovely lawn and grove area.
atural beauty of the surroundings at Camelback Hospital
creates, for the patient,
a restful, scenic setting.

Camelback Hospital

5055 North 34th Street
AMherst 4-4111
PHOENIX, ARIZONA
ARIZONA FOUNDATION FOR NEUROLOGY AND PSYCHIATRY
A Non-Profit Corporation

Located in the heart of the beautiful Phoenix citrus area near picturesque Camelback Mountain, the hospital is dedicated exclusively to the treatment of psychiatric and psychosomatic disorders, including alcoholism.

VED BY THE JOINT COMMISSION ON ACCREDITATION OF HOSPITALS; and THE AMERICAN PSYCHIATRIC ASSOCIATION

Behind continued high blood pressure readings lies the possibility of organic damage[1-13]

MANY OF THE aspects of essential hypertension are unpredictable—either because there are a number of mechanisms involved or because individuals differ in their responses to these mechanisms.[1]

There is one aspect of hypertension, however, that seems, in many cases, predictable. ". . . when the blood pressure is elevated to a marked degree for an adequate period of time, this in itself leads to perpetuation of the syndrome with resulting vascular damage throughout the body."[14] All too often the disease progresses until there is damage to one of three vital organs: the heart, the kidney, the brain.



"Hypertension is certainly a major factor in the genesis of coronary heart disease, and it is even more important when compounded with obesity."[4]

"[Vascular deterioration] can be clearly seen in the kidney with a degree of damage that can be measured by renal function studies."[10]

". . . most evidence suggests that reduction of blood pressure, when it is too high, not only relieves the heart of excess work but reduces vascular damage."[1]

"In short, treatment is indicated."[1]

Antihypertensive therapy will not restore the blood vessels to normal. Yet many of the vascular changes and symptoms caused by increased blood pressure may be arrested or alleviated when the blood pressure is reduced to normotensive levels.[7]

Reducing the blood pressure helps curtail further vascular damage and improves the prognosis — when damage is not too far advanced before therapy is started.[14] Essential hypertension is an indication not only for treatment, but for *early* and adequate treatment of the patient in question.

Reduce the blood pressure with Rautrax-N

Rautrax-N combines the antihypertensive-tranquilizing action of whole root rauwolfia with the antihypertensive-diuretic action of bendroflumethiazide in one convenient medication. The two drugs complement each other so that smaller doses of both are possible.

Rauwolfia combined with bendroflumethiazide is particularly effective in long-term therapy,[15-17] since beneficial effects do not diminish with continuous daily administration.

For most patients 1 or 2 Rautrax-N tablets daily are sufficient for maintenance therapy. The simplicity, convenience and economy of such a dosage schedule are of particular benefit to older patients.

References: 1. Page, I. H., and Dustan, H. P.: The Usefulness of Drugs in the Treatment of Hypertension, in Ingelfinger, F. J.; Relman, A. S., and Finland, M.: Controversy in Internal Medicine, Philadelphia, W. B. Saunders Co., 1966, p. 95. **2.** Hollander, W.: The Evaluation of Antihypertensive Therapy of Essential Hypertension in Ingelfinger, F. J.; Relman, A. S., and Finland, M.: Controversy in Internal Medicine, Philadelphia, W. B. Saunders Co., 1966, p. 97. **3.** Nickerson, M.: Antihypertensive Agents and the Drug Therapy of Hypertension, in Goodman, L. S., and Gilman, A.: The Pharmacological Basis of Therapeutics, ed. 3, New York, The Macmillan Co., 1965, p. 727. **4.** Berkson, D. M.: Indust. Med. & Surg. **32**:371, 1963. **5.** Cohen, B. M.: M. Times **91**:645, 1963. **6.** Lee, R. E., et al.: Am. J. Cardiol. **11**:738, 1963. **7.** Moyer, J. H.: Am. J. Cardiol. **9**:821, 1962. **8.** Moser, M.: New York J. Med. **62**:1177, 1962. **9.** Wood, J. E., and Battey, L. L.: Am. J. Cardiol. **9**:675, 1962. **10.** Moyer, J. H., and Heider, C.: Am. J. Cardiol. **9**:920, 1962. **11.** Moser, M., and Macaulay, A. I.: New York State J. Med. **60**:2679, 1960. **12.** Judson, W. E.: Nebraska M. J. 44:305, 1959. **13.** Hodge, J. V.; McQueen, E. G., and Smirk, H.: Brit. M. J. **1**:5218, 1961. **14.** Moyer, J. H., and Brest, A. N.: Hypertension Recent Advances, Philadelphia, Lea & Febiger, 1961, p. 633. **15.** Berry, R. L., and Bray, H. P.: J. Am. Geriatrics Soc. **10**:516, 1962. **16.** Reid, W. J.: J. Am. Geriatrics Soc. **13**:365, 1965. **17.** Feldman, L. H.: North Carolina M. J. **23**:248, 1962.

Contraindications: Severe renal impairment or previous hypersensitivity. **Warning:** Ulcerative small bowel lesions have occurred with potassium-containing thiazide preparations or with enteric-coated potassium salts supplementally. Stop medication if abdominal pain, distension, nausea, vomiting or G.I. bleeding occur.

Precautions and Side Effects: The dose of ganglionic blocking agents, veratrum or hydralazine when used concomitantly must be reduced by at least 50% to avoid orthostatic hypotension. Caution is indicated in patients with depression, suicidal tendencies, peptic ulcer; electrolyte disturbances are possible in cirrhotic or digitalized patients. Marked hypotension during surgery is possible; consider discontinuing two weeks prior to elective surgery and observe patients closely during emergency surgery. Rauwolfia preparations may cause reversible extrapyramidal symptoms and emotional depression, diarrhea, weight gain, edema, drowsiness may occur. Bendroflumethiazide may cause increases in serum uric acid, unmask diabetes, increase glycemia and glycosuria in diabetic patients, and may cause hypochloremic alkalosis, hypokalemia; cramps, pruritus, paresthesias, rashes may occur.

Dosage and Supply: Initial dosage, 1 to 4 tablets daily, preferably at mealtime. Maintenance, 1 or 2 tablets daily. Rautrax-N is supplied as capsule-shaped tablets containing 50 mg. Rauwolfia serpentina whole root (Raudixin®), 4 mg. bendroflumethiazide (Naturetin®), 400 mg. potassium chloride.

Also available: Rautrax-N Modified — capsule-shaped tablets containing 50 mg. Rauwolfia serpentina whole root (Raudixin), 2 mg. bendroflumethiazide (Naturetin), 400 mg. potassium chloride. Both potencies available in bottles of 100. For full information, see Product Brief.

RAUTRAX®-N

Squibb Rauwolfia Serpentina Whole Root (50 mg.) with Bendroflumethiazide (4 mg.) and Potassium Chloride (400 mg.)



EIGHTH NATIONAL CONFERENCE ON THE MEDICAL ASPECTS OF SPORTS

November 27, 1966

Caesar's Palace
Las Vegas, Nevada

(in conjunction with the
AMA Clinical Convention)

The Conference will cover a wide range of subjects of interest to those serving school and college athletic programs. Among the speakers will be Merritt Stiles, M.D., 2nd Vice President of the U. S. Olympic Committee, and Donald O'Donoghue, M.D., President of the American Academy of Orthopedic Surgeons.

The Conference is open to key non-medical athletic personnel as well as interested physicians. Those who would like to receive further information regarding the Conference should address the Secretary, Committee on the Medical Aspects of Sports, American Medical Association, 535 N. Dearborn Street, Chicago, Illinois 60610.

ARIZONA CHAPTER OF THE AMERICAN COLLEGE OF SURGEONS

January 20-21, 1967

Arizona Inn
Tucson, Arizona

SYMPOSIUM ON SKIN DISEASES COMMON TO MAN & ANIMALS

El Mirador Hotel
Palm Springs, California

November 2, 1966

Co-sponsored by The Committee on Cutaneous Health and Cosmetics of the AMA, and The American Animal Hospital Association.

5th CLINICAL CONFERENCE IN PEDIATRIC ANESTHESIOLOGY

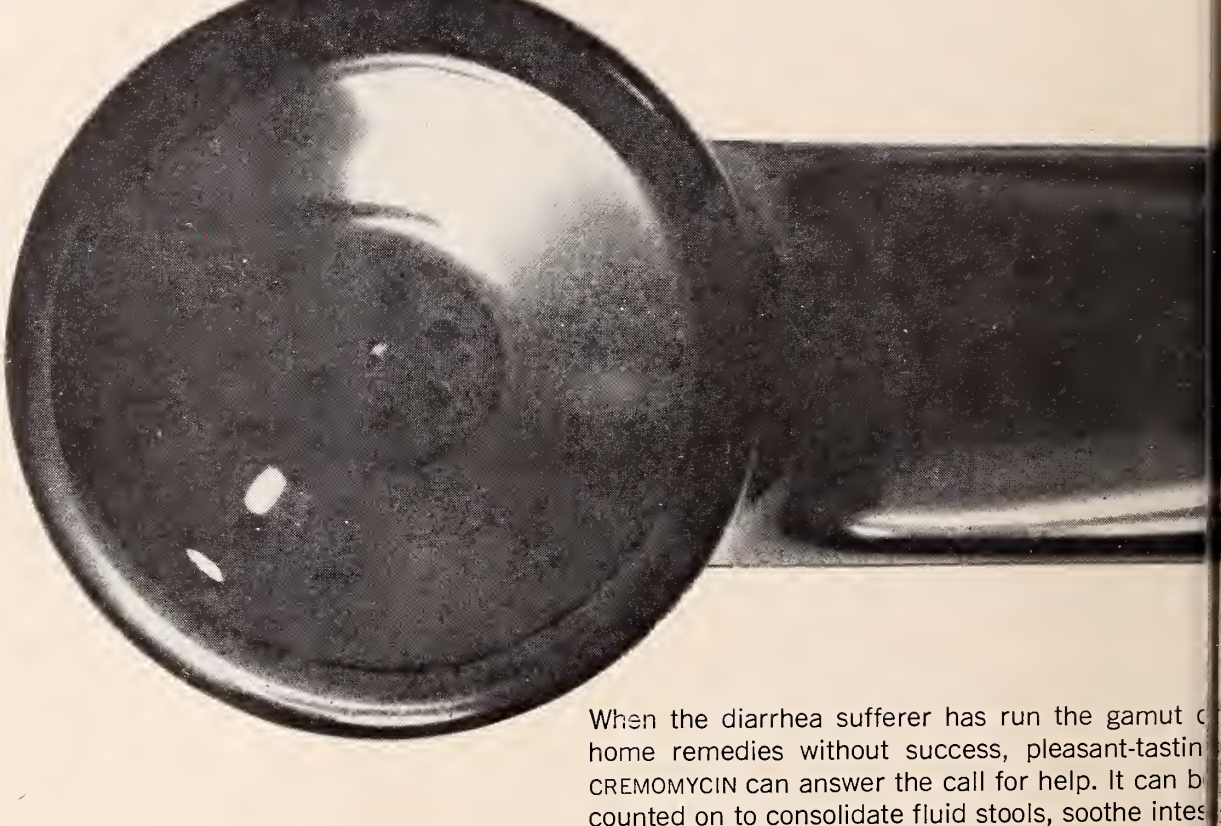
January 27, 28, 29, 1967

Children's Hospital

Los Angeles, Calif.

The three-day program will be devoted to the anesthetic problems of the pediatric age group. Additional information is available through the office of Wayne Herbert, M.D., Division of Anesthesiology, Children's Hospital of Los Angeles, 4614 Sunset Boulevard, Los Angeles, Calif. 90027.

When uncontrolled diarrhea brings a call for help



When the diarrhea sufferer has run the gamut c home remedies without success, pleasant-tastin CREMOMYCIN can answer the call for help. It can b counted on to consolidate fluid stools, soothe intes tinal inflammation, inhibit enteric pathogens, an detoxify putrefactive materials — usually within few hours.

CREMOMYCIN combines the bacteriostatic agents succinylsulfathiazole and neomycin, with the ac sorbent and protective demulcents, kaolin and pec tin, for comprehensive control of diarrhea.

INDICATIONS: Diarrhea.

CONTRAINDICATIONS: Do not use in intestinal obstruction, e tensive ulceration of bowel, or diverticulosis; in hypersensitivi to sulfonamides or neomycin; in pregnancy at term, in prematur infants, or during first week of life in the newborn.

WARNINGS: Use only after critical appraisal in patients wit hepatic or renal damage, urinary obstruction, or blood dyscr sias. Fatal hypersensitivity reactions and blood dyscrasias r ported with use of sulfonamides. Consider periodic blood count hepatic and renal function tests during intermittent or chron use.

PRECAUTIONS: Succinylsulfathiazole: Use with caution if ther is history of significant allergies and/or asthma. Continued us requires supplementary vitamins B_1 and K. *Neomycin:* Watch f

your ℞ for Cremomycin can provide relief



rare-like neuromuscular block during anesthesia if neomycin used preoperatively in large doses when renal function is or; watch for overgrowth of nonsusceptible organisms. Con- ler possibility of ototoxicity and nephrotoxicity with prolonged gh dosage.

DE EFFECTS: As with all sulfonamides: Headache, malaise, an- exia, G.I. symptoms, hepatitis, pancreatitis, blood dyscrasias, uropathy, drug fever, rash, conjunctival and scleral injection, techiae, purpura, hematuria, and crystalluria have been noted. duced fecal output of thiamine and decreased synthesis of amin K have been reported. *Neomycin:* Nausea, loose stools.

fore prescribing or administering, read package circular with oduct or available on request.

romptly relieves diarrheal distress

Cremomycin®

NTIDIARRHEAL

mposition: Each 30 cc. contains neomycin sulfate 300 mg. quivalent to 210 mg. of neomycin base), succinylsulfathiazole Gm., colloidal kaolin 3.0 Gm., pectin 0.27 Gm.

MERCK SHARP & DOHME Division of Merck & Co., Inc., West Point, Pa.

here today's theory is tomorrow's therapy

Physicians' Directory

ArMA

DIRECTORY AND CLASSIFIED RATES

- *Professional card and classified space is available at $3.50 for the first fifty words or less; 5c for each additional word thereafter.*

- *Mail copy to Business Manager, ARIZona MEDICINE, Post Office Box 128, Scottsdale, Arizona 85252, not later than the tenth of the month preceding publication.*

ALLERGY

JOHN F. McKENNA, M.D.
Associate Fellow, American College of Allergists

PARK CENTRAL NORTH
Medical Building
555 West Catalina
Phoenix, Arizona 85013
Phone 264-1381

DANIEL H. GOODMAN, M.D., F.A.C.P.
Diplomate

American Board of Internal Medicine
and Subspecialty Board of Allegry

31 W. Camelback Road
Phoenix
277-3337

500 W. 10th Place
Mesa
969-3966

HOWARD M. PURCELL, JR., M.D.
JAMES A. SMIDT, M.D.

ALLERGY OF CHILDREN

American Board of Pediatrics
American College of Allergists

322 W. McDowell Rd. PHOENIX, ARIZONA
AL 2-9731

ROBERT HEALY STEVENS, M.D.

Fellow American College Chest Physicians
Allergy and Internal Medicine

The Medical Center
1313 N. 2nd Street
Phoenix 4, Arizona

CARDIOLOGY

George W. Bascom, M.D., F.A.C.C., F.A.C.P.

Diplomate of American Board
of Internal Medicine

Practice Limited to Cardiology

Professional Building
Sierra Vista, Arizona 85635

DERMATOLOGY

GEORGE K. ROGERS, M.D.

DERMATOLOGY
Diplomate of American Board of
Dermatology and Syphilology

Phone ALpine 3-5264
105 W. McDowell Road Phoenix, Arizona

ONCOLOGY

JAMES M. OVENS, M.D.
F.A.C.S. F.I.C.S.

Diplomate American Board of Surgery
Cancer and Tumor Surgery
X-ray and Radium Therapy

333 W. Thomas Road Phone 279-7301
Phoenix 13, Arizona

ORTHOPEDIC SURGERY

THE ORTHOPEDIC CLINIC
ORTHOPEDIC SURGERY

W. A. Bishop, Jr., M.D., F.A.C.S.* — A. L. Swenson, M.D. F.A.C.S.* — Ray Fife, M.D., F.A.C.S.* — Sidney L. Stovall, M.D. F.A.C.S.* — Thomas H. Taber, Jr., M.D., F.A.C.S.*
Robert A. Johnson, M.D.* — Paul E. Palmer, M.D.*
*Diplomates of the American Board of Orthopedic Surgery

2620 N. 3rd Street — Phoenix, Arizona — CR 7-6211

Physicians' Directory

PATHOLOGY

LOUIS HIRSCH, M.D.
RALPH H. FULLER, M.D.
WILLIAM M. HINDMAN, M.D.
EDWARD A. BRUCKER, M.D.
ARTHUR D. SILVER, M.D.

Diplomates American Board of Pathology
Clinical Pathology — Pathologic Anatomy

1601 N. Tucson Blvd.
Tucson, Arizona

PSYCHIATRY

LEO RUBINOW, M.D.
PSYCHIATRY
AM 6-0630

224 E. Thomas Rd. Phoenix, Arizona

RADIOLOGY

R. LEE FOSTER, M.D., F.A.C.R., F.A.C.P.
MARTIN L. LIST, M.D., Radiologist

Diplomates of American Board of Radiology
Diagnostic Roentgenology

1313 N. Second St.
Phone ALpine 8-3484
Phoenix, Arizona

MARCY L. SUSSMAN, M.D., F.A.C.R.
Diplomate of American Board of Radiology

DIAGNOSTIC RADIOLOGY
THERAPEUTIC RADIOLOGY
RADIOISOTOPES

1130 E. McDowell Rd.
Phoenix, Arizona
ALpine 8-1601

540 Wells Fargo
Scottsdale, Arizona
WHitney 5-3959

JOHN W. KENNEDY, M.D.
F. S. TOLONE, M.D.
W. T. COOK, M.D.

Radiology, Diagnosis, X-ray and Cobalt Therapy

4550 N. 51st Avenue
Phoenix, Arizona 85031

Pharmacy Directory

Fairmont Pharmacy
3231 East McDowell Road Phoenix, Arizona

PRESCRIPTIONS — DRUGS — COSMETICS — FOUNTAIN

BRidge 5-5719 FREE DELIVERY

In Scottsdale call
Lute's Scottsdale Pharmacy
For
PRESCRIPTIONS
WH 5-8420 — WH 5-8429
Next to the 1st National Bank

This Space
Available



Pharmacy Directory

Serving Arizona
Health Needs
Since 1908

Ryan-Evans
DRUG STORES

Phoenix - Tucson - Scottsdale - Mesa - Tempe
Maryvale - Glendale - Westown - Sunnyslope
Paradise Hills - Carefree - Apache Junction
Globe - Miami - Casa Grande - Wickenburg

Classified

DOCTOR'S CENTRAL DIRECTORY

Helen M. Barrasso, R. N., Director
For Emergencies or in Absence of Your Doctor

CALL EA 7-7471

At Your Service 24 Hours Daily

2807 East Speedway Tucson, Arizona

"Established 1932"

DANNY T. SEIVERT INSURANCE

Malpractice & Non-Cancelable Disability with Guaranteed Rates

Professional Programs for Professional Men

Del Webb's TowneHouse — Suite 1700
100 W. Clarendon — Phoenix
Telephone 277-1487

Classified

Private practice available for Board certified or Board eligible Internist at Cottonwood, Arizona. New hospital facilities available, plus office space. Estimated income of approximately $30,000 for first year. Any other necessary information please contact Roland W. Wilpitz, [illegible]vrence Memorial [illegible]ttonwood, Arizona 863[illegible]

ATTENTION: Immediate opening for physician interested in Group General Practice in Arizona. New clinic and hospital facilities. No investment or equipment necessary. Industrial connection allows immediate salary. Will accept draft eligible physician. Reply: Drawer M, Miami, Arizona.

Situation Wanted: Board Certified General Surgeon desires to re-locate in Arizona; licensed in Arizona; married with family; no objection to limited GP; available for personal interview for mutual evaluation. Reply: Box 64-3, 4601 N. Scottsdale Road, Suite 201, Scottsdale, Arizona 85251.

EENT Physician and Surgeon desires to semi-retire and relocate. Would consider association, solo practice or Student Health position as General Practitioner. Licensed in Arizona. Reply: Box 64-10, 4601 N. Scottsdale Road, Suite 201, Scottsdale, Arizona 85251.

ATTENTION INVESTORS! I will contribute my high equity in two commercial acres in North Phoenix, suitable 100 bed Nursing Home, near hospital, stores, bus. Major financing believed available. Or sell outright, or ground lease. Let's talk. J. T. Coffee, Jr. Owner-Realtor. P. O. Box 16152, Phoenix. (602) 264-0667.

Arizona Medicine

JOURNAL OF ARIZONA MEDICAL ASSOCIATION
MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO

NOVEMBER 1966
VOL. 23, NO. 11

FEATURES:

MEGALOBLASTIC ANEMIA OF PREGNANCY 837
William L. Bunting, M.D.

NAME: DOCTOR OR PHYSICIAN 875
Leslie B. Smith, M.D.



NOV 28 1966
San Francisco 22
University of California
Medical Center Library
3rd & Parnassus
San Francisco 22

some allergens are red...



whatever their color, shape, or size...

Benadryl®

(diphenhydramine hydrochloride)

PARKE-DAVIS

for control of allergic symptoms

Whether the allergen is red and round, or unseen and unknown, BENADRYL provides relief of symptomatic distress through its antihistaminic and antispasmodic actions. *PRECAUTIONS:* Persons who have become drowsy on this or other antihistamine-containing drugs, or whose tolerance is not known, should not drive vehicles or engage in other activities requiring keen response while using this product. Hypnotics, sedatives, or tranquilizers if used with BENADRYL should be prescribed with caution because of possible additive effect. Diphenhydramine has an atropine-like action which should be considered when prescribing BENADRYL. *SIDE EFFECTS:* Side reactions, commonly associated with antihistaminic therapy and generally mild, may affect the nervous, gastrointestinal, and cardiovascular systems. Most frequent reactions are drowsiness, dizziness, dryness of the mouth, nausea, and nervousness. BENADRYL is available in Kapseals® of 50 mg. and Capsules of 25 mg. 00666

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

1866 1966 100th ANNIVERSARY

Lutrexin®

HW&D BRAND OF LUTUTRIN

3000 UNIT TABLETS

IN THE TREATMENT OF FUNCTIONAL DYSMENORRHEA AND SELECTED CASES OF PREMATURE LABOR AND 2ND AND 3RD TRIMESTER THREATENED ABORTION

In controlling abnormal uterine activity, LUTREXIN, the non-steroid "uterine relaxing factor" has been found to be the drug of choice by many clinicians.

No side effects have been reported, even when massive doses (25 tablets per day) were administered.

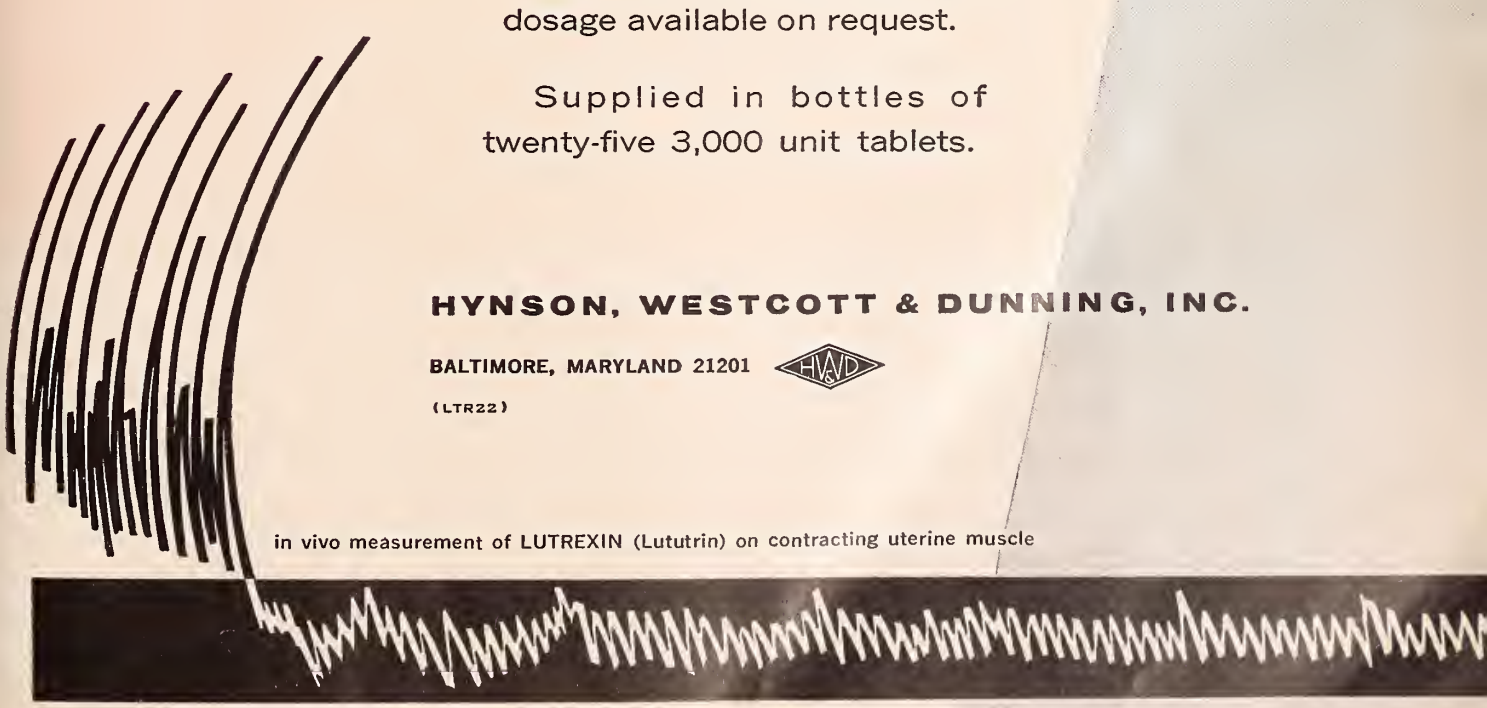
Literature on indications and dosage available on request.

Supplied in bottles of twenty-five 3,000 unit tablets.

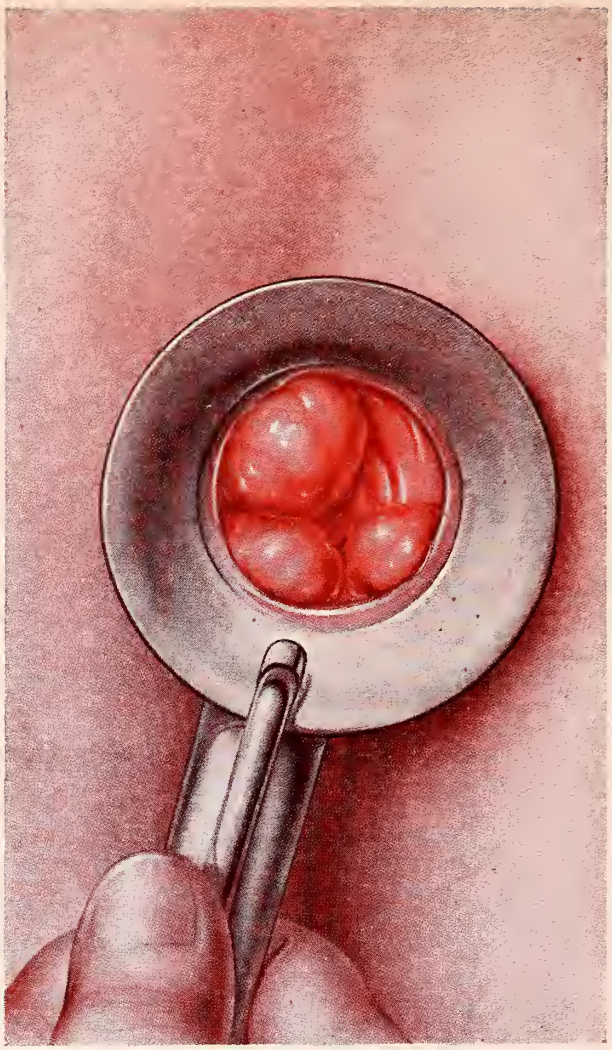
HYNSON, WESTCOTT & DUNNING, INC.

BALTIMORE, MARYLAND 21201 H&D

(LTR22)



in vivo measurement of LUTREXIN (Lututrin) on contracting uterine muscle



pain and swelling of hemorrhoids effectively relieved with PNS® SUPPOSITORIES



Each suppository contains:

Pontocaine® (brand of tetracaine) HCl	10 mg.
Neo-Synephrine® (brand of phenylephrine) HCl	5 mg.
Superinone® (brand of tyloxapol)	25 mg.
Bismuth subcarbonate	100 mg.

PNS Suppositories contain Pontocaine for long-acting topical analgesia, Neo-Synephrine for dependable decongestion, bismuth subcarbonate for protective coating of ulcerations and Superinone for its spreading effect.

Tolerance: PNS Suppositories are generally very well tolerated. Slight burning, lasting a minute or two, has occurred in a few instances. However, should evidence of sensitivity appear, use of the suppository should be discontinued.

Directions: Insert 1 suppository rectally after each bowel movement and on retiring.

How Supplied: Boxes of 12.

Winthrop

Winthrop Laboratories, New York, N.Y.

1042M

Arizona Medicine

JOURNAL OF ARIZONA MEDICAL ASSOCIATION

MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO

November, 1966
Vol. 23, No. 11

Table of Contents

EDITOR'S PAGE

TITLE XIX 807
Roland F. Schoen, M.D.

ARIZONA MEDICAL ASSOCIATION REPORTS

AD HOC COMMITTEE ON FEDERAL SERVICES – 9/18/66 819
ArMA LIAISON COMMITTEE WITH THE ARIZONA HOSPITAL ASSOC. – 9/25/66 .. 820
BENEVOLENT & LOAN FUND COMMITTEE – 10/2/66 821

ORIGINAL ARTICLES

MEGALOBLASTIC ANEMIA OF PREGNANCY 837
William L. Bunting, M.D.
CARDIOVASCULAR PROBLEMS IN ADOLESCENCE 843
Leonard M. Linde, M.D.
LUNG CANCER – DIAGNOSIS AND TREATMENT, 1966 847
Richard K. Hughes, M.D.

PRESIDENT'S PAGE

". . . which is the life thereof." 869
Paul B. Jarrett, M.D.

DEAN'S PAGE

ADMISSION TO MEDICAL SCHOOL 871
Merlin K. DuVal, Jr., M.D.

EDITORIALS

PRINCIPLES OF MEDICAL ETHICS 873
William B. McGrath, M.D.
NAME: DOCTOR OR PHYSICIAN 875
Leslie B. Smith, M.D.

IN MEMORIAM

Eugene A. Gatterdam, M.D. 881

SQUAW PEAK SKETCHES 882

TOPICS OF CURRENT MEDICAL INTEREST

ArMA TO SPONSOR STATE-WIDE DIABETES DETECTION DRIVE 889
BARROW NEUROLOGICAL INSTITUTE 890

FUTURE MEDICAL MEETINGS 895

DIRECTORY

OFFICERS AND COMMITTEES 818
MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO 818
SOCIEDAD MEDICA DE ESTADOS UNIDOS DE NORTE AMERICA Y MEXICO ... 818
WOMAN'S AUXILIARY 818
INDEX TO ADVERTISERS Inside Back Cover

Published monthly by The Arizona Medical Association, Inc., with offices at 4601 N. Scottsdale Rd., Suite 201, Scottsdale, Arizona 85251. Subscription $5 a year, single copy 50 cents. Second class postage paid at Scottsdale, Arizona, and at additional mailing offices.



Now, now, Mrs. Forsythe, we've never lost a cold patient yet.

When she's experiencing acute discomfort from cold symptoms, it's small wonder the patient becomes distressed about her condition.

She will breathe easier when you prescribe Novahistine LP.

Novahistine LP is a long-acting decongestant that helps restore normal mucus secretion and ciliary activity—physiologic mechanisms which prevent infection of the respiratory tract. A dose of two tablets taken in the morning and repeated in the evening will usually keep air passages clear for 24 hours.

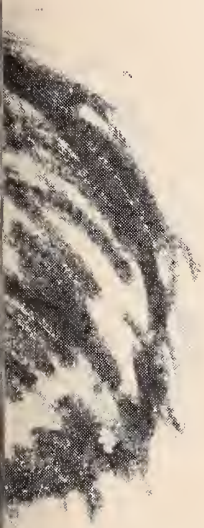
Use cautiously in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution patients who operate machinery or motor vehicles that drowsiness may result.

Each Novahistine LP tablet contains: phenylephrine hydrochloride, 25 mg., and chlorpheniramine maleate, 4 mg.

DOW **PITMAN-MOORE** Division of The Dow Chemical Company, Indianapolis

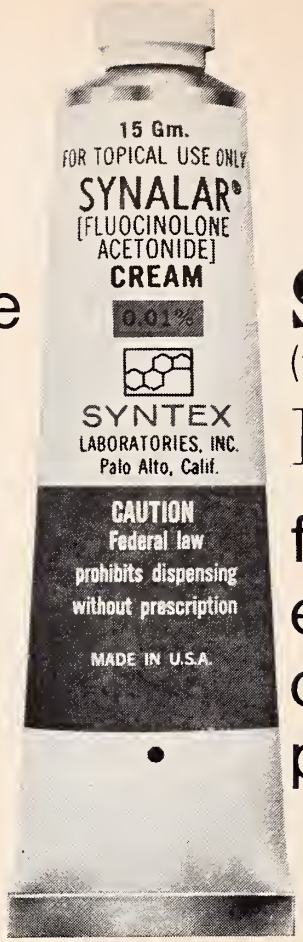
NOVAHISTINE® LP

For relief of nasal congestion.



Saxon

new small size



Synalar® 0.01%
(fluocinolone acetonide) **cream**
15 Gm.

for even greater economy in office or hospital practice

the superiority topical with the

Now you can prescribe as little or as much Synalar Cream 0.01% as is needed for a particular therapeutic problem in a size that permits the greatest economy for your patient. The new 15 Gm. tube, for example, is best suited for short-term therapy and for small sites. For more extensive body areas prescribe the 45 Gm. tube—a size that's also ideal for your treatment table. And the 120 Gm. jar is most economical for hospital use. Thus, with Synalar Cream 0.01%, you have the superiority of a modern topical corticosteroid shown to be more effective than 1% hydrocortisone[1-3] plus the economy that makes therapy practical for use in more dermatologic conditions, in long-term maintenance, with occlusive dressings in resistant cases, and in extensive area involvement.

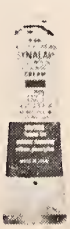
Contraindications: Tuberculous, fungal, and most viral lesions of the skin (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use. Contraindicated in individuals with a history of hypersensitivity to any of its components. **Precautions:** 1. *General*—Synalar Cream 0.01% is virtually nonsensitizing and nonirritating. Where severe local infection or systemic infection exists, the use of systemic antibiotics should be considered, based on susceptibility testing. While topical steroids have not been reported to have an adverse effect on pregnancy, the safety of their use on pregnan females has not absolutely been established. Therefore, they should not b used extensively on pregnant patients, in large amounts, or for prolonge periods of time. 2. *Occlusive dressing method*—With occlusion of extensiv areas, systemic absorption of the corticosteroid may occur, and suitabl precautions should be taken. Occasional patients may show contact sens tivity to a particular dressing material or adhesive. Miliaria, folliculitis, o pyodermas have been seen infrequently with the use of this technique. The development of infection requires appropriate antibacterial therapy and di continuation of the occlusive dressing method. Local atrophy and striae have been reported with protracted occlusive dressing therapy. While lesion relapses can be expected to occur in many psoriatic patients, remissions may persist for several weeks to several months in favorable cases. The patient whose psoriasis is in an active stage, with recent appearance of new lesions, may not be a good candidate and may show early relapse. Some plastic films may be flammable, and due care should be exercised in their use. Similarly, caution should be employed when such films are used on o left near children to avoid the possibility of accidental suffocation. **Side Effects:** Side effects are not ordinarily encountered with topically applied corticosteroids. As with all drugs, however, a few patients may react unfa vorably to Synalar under certain conditions. **References:** 1. Cahn, M. M., and Levy, E. J.: J New Drugs 1:262 (Nov.-Dec.) 1961. 2. Meenan, F. O.: J Irish Med Ass 52:75 (Mar.) 1963. 3. Robinson, H. M., Jr., Raskin, J., and Dunseath W. J. R.: Southern Med J 56:797 (Jul.) 1963.

of a modern corticosteroid economy of hydrocortisone

Now...a choice of 3 economical sizes



120 Gm. jar



15 Gm. tube

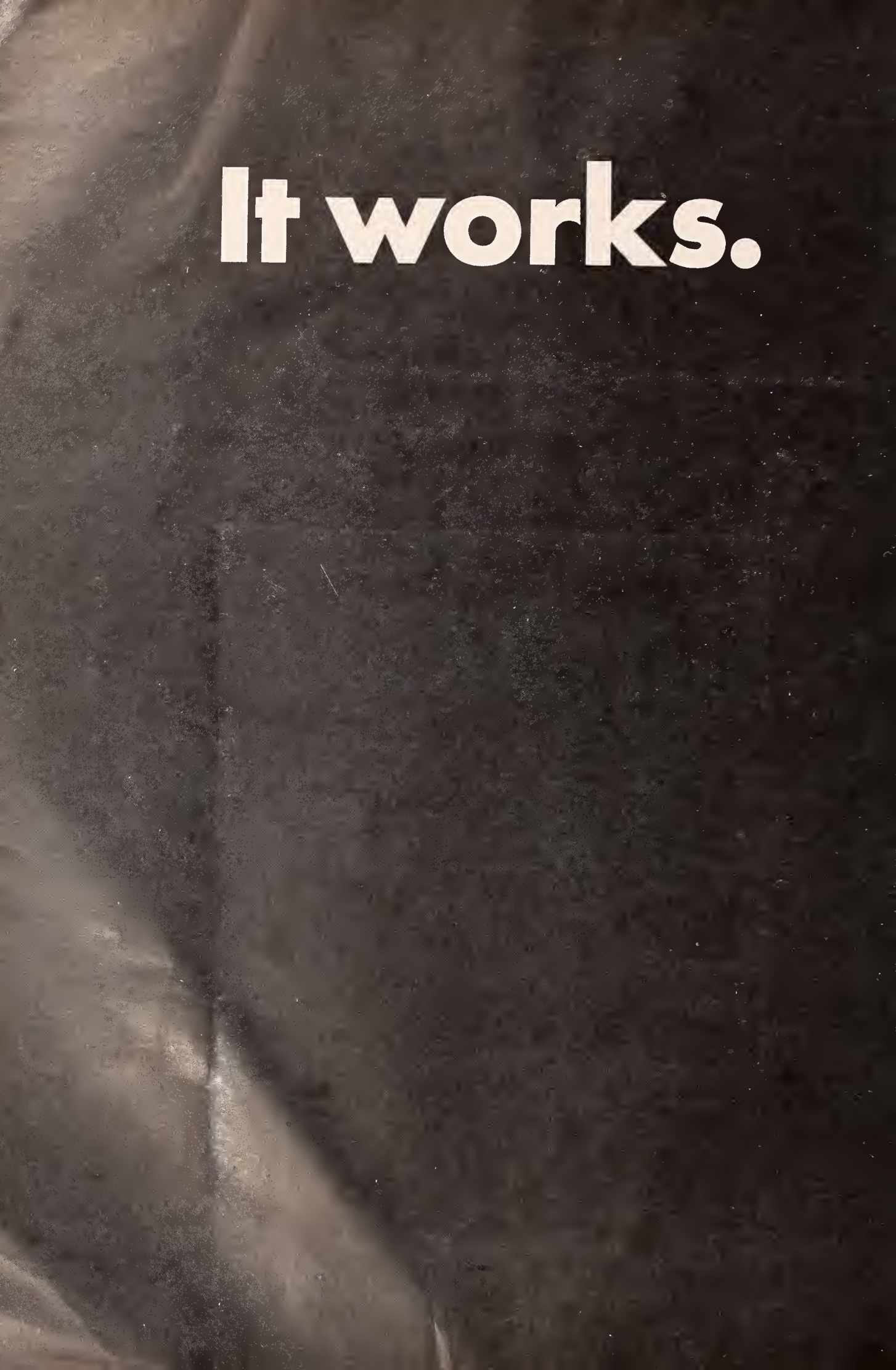


45 Gm. tube

fluocinolone acetonide — an original steroid from

SYNTEX

LABORATORIES INC., PALO ALTO, CALIF.


It works.

SUMMARY:

TREST® (METHIXENE HYDROCHLORIDE)

relieves G.I. spasm, hyperactivity and associated pain by directly antagonizing the parasympathetic nervous system.

Each tablet contains methixene hydrochloride, 1 mg.

INDICATIONS: Gastrointestinal Spasm and Hypermotility.

CONTRAINDICATIONS: Pyloric obstruction, gastric retention, obstructive organic disease of the gastrointestinal tract, organic cardiospasm, duodenal stenosis, stenosing peptic ulcer, and urinary bladder neck obstruction or prostatic hypertrophy are contraindications to the use of this drug.

WARNING: Overdosage produces anticholinergic side effects. Although the animal reproduction studies are negative, until there is clinical confirmation of safety in pregnancy, this product should not be used in women who may become pregnant unless in the opinion of the physician the benefits outweigh the risks.

PRECAUTIONS: Use only with caution in patients with certain types of cardiovascular disease, since anticholinergic drugs may cause arrhythmias. Extensive clinical studies of TREST have shown no evidence of glaucoma. However, the possibility exists that it can occur since it has been reported as a characteristic side effect of anticholinergic drugs. This product does not replace definitive treatment in organic gastrointestinal disease.

SIDE EFFECTS: Side effects are generally absent when TREST is used in the recommended dosage of 1 to 2 mg. three times daily. Uncommonly, allergy or sensitivity to the drug may be manifested by generalized rash or widespread desquamation. In case of prolonged or massive overdosage, dry mouth, blurred vision, and urinary retention, typical side effects common to anticholinergic drugs, may occur. Occasionally, sensitive patients may notice mild dryness of mouth or slight blurring of vision from doses of 2 mg. or more. Most patients tolerate single doses of 5 mg. without such side effects.

DOSAGE: The usual adult dosage is 1 mg. by mouth three times daily. If necessary, the dose may be increased to 2 mg. three times daily. Pediatric dosage has not been determined.

CAUTION: Federal law prohibits dispensing without prescription.

Puts the G.I. tract to rest

DORSEY LABORATORIES • *a division of The Wander Company* • **Lincoln, Nebraska**

An antispasmodic that antagonizes.

How TREST®
(METHIXENE HYDROCHLORIDE)
works.

parasympathetic nerve

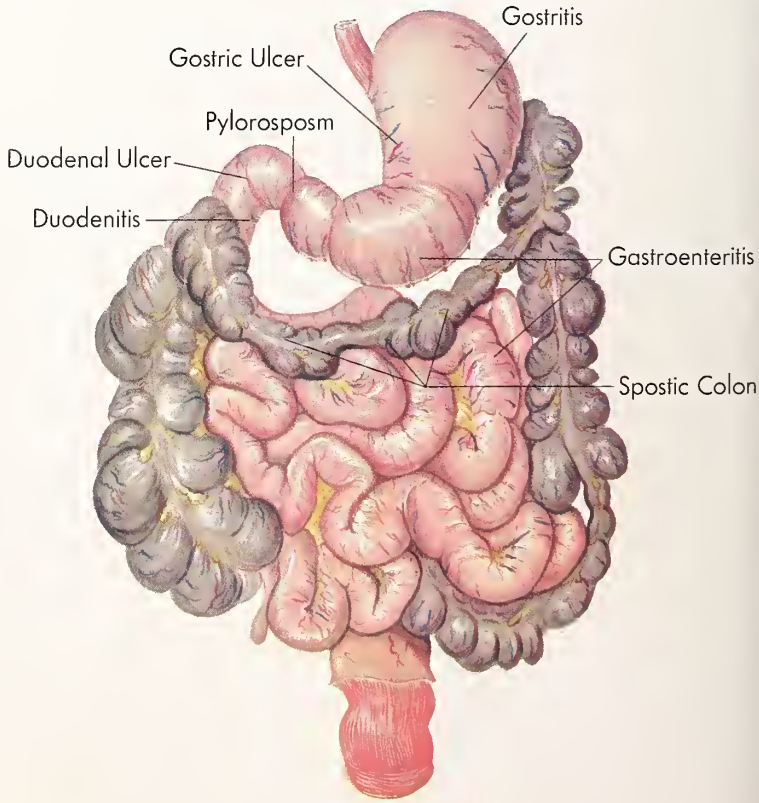
TREST (methixene hydrochloride) directly antagonizes the parasympathetic nervous system.

TREST (methixene hydrochloride) blocks the action of acetylcholine formed at the synapses and visceral parasympathetic nerve endings.

Therefore, nerve impulses are prevented from reaching the smooth muscle layer.

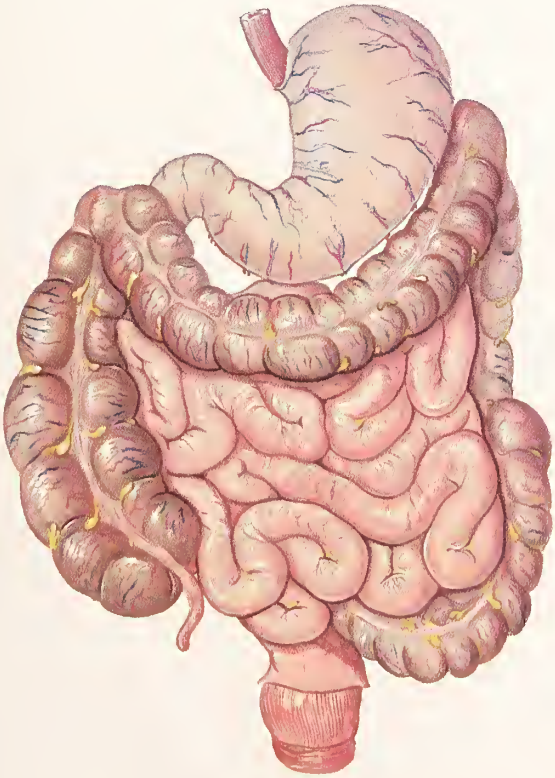
Smooth Muscle
Nerve Endings
napse
Block

TREST® (METHIXENE HYDROCHLORIDE) relieves gastrointestinal spasm, hyperactivity and associated pain in:



Put the gut to rest with your prescription for TREST®

(METHIXENE HYDROCHLORIDE)



Evidence that TREST® (METHIXENE HYDROCHLORIDE) works.

EFFECTIVENESS AND SAFETY

t.i.d. dosage in milligrams

1 mg. symptomatic relief

2 mg. upper recommended clinical dose/greater pharmacologic activity and symptomatic relief/side effects uncommon

10 mg.

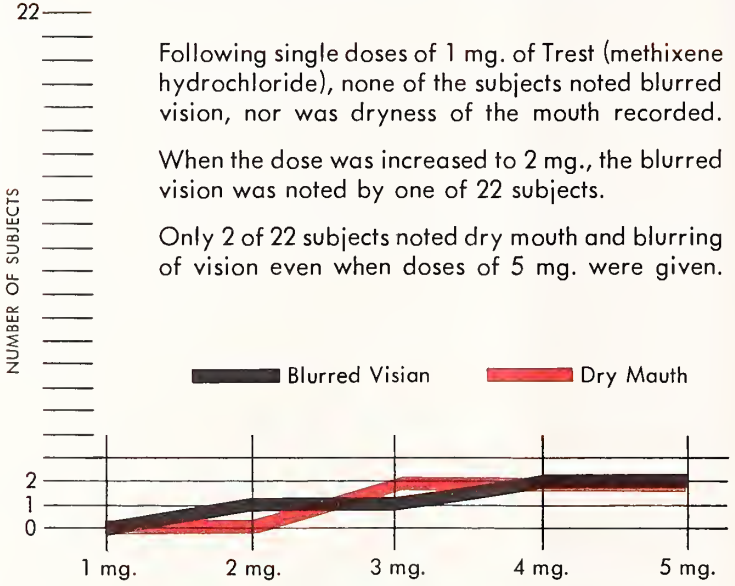
Studies with 372 subjects revealed no adverse effect upon vital organs when dosage was increased 10 times the normally effective dose of 1 mg. t.i.d. for periods up to 2½ years of continued administration.

LACK OF SIDE EFFECTS

Following single doses of 1 mg. of Trest (methixene hydrochloride), none of the subjects noted blurred vision, nor was dryness of the mouth recorded.

When the dose was increased to 2 mg., the blurred vision was noted by one of 22 subjects.

Only 2 of 22 subjects noted dry mouth and blurring of vision even when doses of 5 mg. were given.



Conclusion: Typical atropine-like side effects are not expected when Trest is used 1 mg. t.i.d. These effects are uncommon when the dosage is increased to 2 mg. t.i.d.

"A highly satisfactary symptomatic respanse was abtained in 20 af the 23 patients wha taok 1 mg. af methixene hydrachlaride (Trest) by mouth three times daily. Na side effects accurred at this dasage during administratian af the medication itself.

"Methixene hydrachloride (Trest) pravides highly gratifying sympta-matic relief in a variety af canditians assaciated with gastraintestinal motility withaut praducing the usual atrapine-like side effects and withaut requiring cancurrent barbiturate sedatian."

—Martins, J. K.:
Clin. Med. *72*:1313-1316
(Aug.) 1965.

". . . in a series of 47 patients suffering fram various types af functianal bawel distress. The superiority af this drug (Trest) in dosage af 1.0 mg. three times daily by mauth aver the placeba is statistically significant. At that dosage level, side effects were nat abserved."

—Hufford, A. R.:
Clin. Med. *72*:1151-1155
(July) 1965.

An antispasmodic that antagonizes.

"'Tranquilizer' is not a good word"[1]

"THIS classification is psychologically too seductive, pharmacologically too unspecific, and in terms of results not infrequently untrue."[2]

What is a tranquilizer? According to the 24th Edition of Dorland's Medical Dictionary[3] a tranquilizer is "an agent which acts on the emotional state, quieting or calming the patient without affecting clarity of consciousness."

Defining a drug by its effects, however, can be misleading. The same effects by which the dictionary defines a tranquilizer have sometimes been seen after administration of a sedative — or, for that matter, a placebo.

Ambiguous though the term may be, it appears to be here to stay. The 1966 edition of the Physicians' Desk Reference[4] lists 42 tranquilizers indicated for treatment of anxiety and apprehensive states.

'Tranquilizers' have differences in action, differences in effect

Although all tranquilizers are intended to calm anxious patients there *are* differences in their actions — and in their effects. They have been divided into three categories — the rauwolfia group, the 'minor' tranquilizers, and the phenothiazines.[5]

Although the tranquilizing effect of rauwolfia has been known for centuries, its use as an antipsychotic agent in current practice has diminished.[5]

A 'minor' tranquilizer is often prescribed to achieve more than one effect. Thus, besides being tranquilizers some of these compounds may be muscle relaxants, antihistaminics with some calming action, anticholinergic sedatives, or antispasmodics.[5]

The phenothiazines are considered 'major' tranquilizers because they alter psychotic behavior.[1] This classification may have done them more harm than good because it implies that the phenothiazines should be reserved for the more severely disturbed. This is not necessarily true.

The phenothiazines — and the problem of sedation

One of the problems of prescribing phenothiazines for ambulatory patients has been the fear that excessive sedation will impair the patient's ability to function. This, however, is less of a problem with some of the phenothiazines.

"Clinically they may be differentiated primarily in terms of their potency and the extent of their sedative effect, which appear to be inversely proportional. That is, the least potent, the one which is used in highest dosage, chlorpromazine, is the most sedative, while the reverse holds true for fluphenazine."[6]

In a recent report on various studies conducted over several years evaluating 360 patients treated for anxiety and stress with seven phenothiazines, this inverse relationship of potency to sedation was confirmed.[7] Also under consideration was the degree to which the particular phenothiazines neutralized anxiety (the angolytic index). Interestingly enough there was, again, an inverse relationship. The most sedative of the phenothiazines appeared to be the least active in neutralizing anxiety. Fluphenazine, one of the least sedative, on the other hand, was found to be most effective in relieving anxiety.[7]

RELATIVE SEDATIVE AND ANGOLYTIC INDICES OF PRINCIPAL PHENOTHIAZINES*

DRUG	SEDATIVE INDEX	ANGOLYTIC INDEX	BASED ON STANDARD DOSE OF
Chlorpromazine	100	15	25 mgs.
Triflupromazine	100	15	25 mgs.
Thioridazine	90	17	25 mgs.
Perphenazine	15	25	4 mgs.
Carphenazine	25	25	25 mgs.
Trifluoperazine	3.3	95	2.0 mgs.
Fluphenazine	3.5	100	2.5 mgs.

*adapted from Sainz[7]

Prolixin is therapeutically effective without excessive sedation

When used as a 'tranquilizer' in general medical practice, in many patients Prolixin (Squibb Fluphenazine Hydrochloride) suppresses anxiety, but not normal activity. These two features are of particular importance to patients who must be able to live and work without their normal daily activities being restricted.

Because of its longer duration of action, Prolixin, in doses of as little as one to three milligrams in adults, generally taken once a day, is effective in maintaining many patients free of their symptoms of anxiety and tension.

Contraindications: Do not use with high doses of hypnotics or in patients with subcortical brain damage. Use with caution in patients with a history of convulsive disorders. Severe reactions may occur in patients with idiosyncrasy to other centrally-acting drugs, and severe hypotension may occur in patients with special medical disorders, e.g. mitral insufficiency and pheochromocytoma.

Precautions: Effects of atropine, anesthetics and C.N.S. depressants may be potentiated. Hypotension may occur in patients undergoing surgery. Do not use epinephrine for treatment of the hypotensive reactions which may appear in patients on phenothiazine therapy.

Side Effects: Extrapyramidal reactions, allergic skin reactions, the possibility of anaphylaxis, drowsiness, visual blurring, dizziness, insomnia, nausea, anorexia, salivation, edema, perspiration, dry mouth, abnormal lactation, polyuria, hypotension, and jaundice and biliary stasis may occur. Routine blood counts are recommended to determine possible blood dyscrasias; if symptoms of upper respiratory infection occur, discontinue drug and institute appropriate therapy.

Available: 1 mg. tablets. Bottles of 50 and 500.

For full prescribing information, see package insert

References: 1. Simpson, G.M.: Postgrad. Med. 39:557, 1966. 2. Freyhan, F.A.: Am. J. Psychiat. 115:577, 1959. 3. Dorland's Illustrated Medical Dictionary, ed. 24, Philadelphia, W. B. Saunders Co., 1965, p. 1603. 4. Physicians' Desk Reference, 1966, Oradell, N.J., 1965, p. 310. 5. Cohen, S.: Northwest Med.: 65:197, 1966. 6. Detre, T., and Jarecki, H.: Connecticut Med. 25:553, 1961. 7. Sainz, A.: Psychosomatics 5:167, 1964.

PROLIXIN®
SQUIBB FLUPHENAZINE HYDROCHLORIDE

SQUIBB 'The Priceless Ingredient' of every product is the honor and integrity of its maker

New
low-cost tetracycline/antifungal therapy

for broad-spectrum activity plus specific antifungal prophylaxis at significant patient savings

Whenever tetracycline is indicated in these candidates for Candida:

. diabetic patients



2. nonpregnant women with a history of recent or recurrent monilial vaginitis



3. elderly or debilitated patients



. patients with a past history of moniliasis



5. patients on long-term tetracycline or corticosteroid therapy



BRISTOL THERAPEUTIC SUMMARY: For complete information consult Official Package Circular. *Indications:* Infections of respiratory, gastrointestinal and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms, in patients with increased susceptibility to monilial infections. *Contraindications:* The drug is contraindicated in patients hypersensitive to its components. *Warnings:* Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood). *Precautions:* Bacterial superinfection may occur. Infants may develop increased intracranial pressure with bulging fontanels. In gonorrheal therapy, scrologic tests for syphilis should be conducted initially and monthly for 3 months. *Adverse Reactions:* Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis, and allergic reactions may occur. *Usual Adult Dosage:* 1 capsule *q.i.d.* Continue therapy for 10 days in beta-hemolytic streptococcal infections. Administer one hour before or 2 hours after meals. *Supply:* Capsules, bottles of 16. Each capsule contains tetracycline phosphate complex equivalent to 250 mg. tetracycline HCl activity and 250,000 units of nystatin.

BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York

Tetrex-F®

Each capsule contains tetracycline phosphate complex equivalent to tetracycline hydrochloride 250 mg. and nystatin 250,000 units.

Tetrex-F is priced lower than most tetracycline-antifungal products.

ARIZONA MEDICINE

Roland F. Schoen, M.D. Editor
Mr. Bruce E. Robinson Managing Editor
Mrs. Evelyn Kuebler Editorial Assistant

ASSISTANT EDITORS
Original Articles

Mayer Hyman, M.D. — Preston J. Taylor, M.D.
Kenneth Johnson, M.D. — Robert F. Lorenzen, M.D.

Editorial Section

R. Lee Foster, M.D. — William B. McGrath, M.D.
John R. Green, M.D. — Leslie B. Smith, M.D.
John W. Kennedy, M.D.

ASSOCIATE EDITORS

Earl J. Baker, M.D. Civil Defense
Max Baumeister, Jr., M.D. Anesthesiology
Chester G. Bennett, M.D. General Surgery
William E. Crisp, Jr., M.D. Obstetrics and Gynecology
Philip E. Dew, M.D. Pediatrics
Charles W. Elkins, M.D. Neurosurgery
Eugene Leibsohn, M.D. Dermatology
James D. Nauman, M.D. Medical Society of U.S. & Mexico
William M. Hindman, M.D. Pathology
C. Thomas Read, M.D. Thoracic Surgery
Wallace A. Reed, M.D. Medical Economics
Paul L. Singer, M.D. Genito-Urinary
George A. Spendlove, M.D. Public Health
Alvin L. Swenson, M.D. Orthopedics
William G. Ure, M.D. Tuberculosis

Editorials of Arizona Medicine are the opinions of the authors and do not necessarily represent the official stand of The Arizona Medical Association, Inc. The opinions of the Board of Directors may be sought in the published proceedings of that body.

Address all correspondence to the
Journal Offices
4601 N. Scottsdale Rd., Scottsdale, Ariz. 85251

Bruce E. Robinson
Business Manager

National Representative
State Journals West
Melvin B. Tyler, Advertising Manager
693 Sutter Street
San Francisco, California 94102

"The material in this journal is not copyrighted. We ask that anyone using material from it note the previous publication in ARIZONA MEDICINE."

CONTRIBUTIONS

The Editor sincerely solicits contributions of scientific articles for publication in ARIZONA MEDICINE. All such contributions are greatly appreciated. All will be given equal consideration.

Material submitted for publication in ARIZONA MEDICINE sbould conform to the following policies:

1. Manuscripts, including references or bibliography, should be typewritten, double-spaced, on one side of the paper only, and the original and a carbon enclosed.
2. Be guided by the general rules of medical writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.
3. Althougb the Editors try to catch inaccuracies, the ultimate responsibility is the author's.
4. Articles are accepted for publication only if they are contributed exclusively to this Journal. Ordinarily, contributors will be notified within 60 days if a manuscript is accepted for publication. Every effort will be made to return unused manuscripts.
5. The Journal reserves the right to edit all material.
6. Reprints will be supplied to the autbor at printing cost.

TITLE XIX

It is amazing what some people will do for a buck. Especially if that buck is loose, uncontrolled, floating about, and just looking for some place to be spent. Our very affluence encourages such a condition, while Public Law 89-97 has declared what amounts to an open season on the specie, although no bag or possession limits have as yet been set.

Several months ago an information sheet or "flyer" arrived at *Arizona Medicine* which was reportedly being distributed to people in New York City by the Mount Sinai Hospital of that same city. Believing that some error must surely exist, your editor wrote to the hospital in question and received a letter in reply accompanied by a beautiful little printed brochure which supported the flyer material, which, in fact, it never denied.

For the purpose of editorial clarity the flyer, letter, and brochure are labelled Specimens "A," "B," and "C" and are reproduced for inspection on pages 809-813 of this issue.

Public Law 89-97 consists of two portions, Title XVIII, or the Medicare portion, being concerned with a national health insurance program under Social Security for those people in these United States of age 65 or over. Title XIX of this same Public Law provides for special medical treatment of individuals up to age 21, but also includes the medical treatment of any medical indigent (Welfare recipients) regardless of age. This portion has been called Medicaid and is IN ADDITION to the Medicare Program of the Federal Government.

The Medical Society of the State of New York is at the present time negotiating a fee schedule between the state society and the administering agencies relative to Title XIX. Welfare recipients are no longer to be second-class citizens,

and are to receive medical care in the same fashion as other citizens, such care to be paid for on the basis of the prevailing rate in the community.

Now this will amount to quite a bundle! In fact, it might strain the resources of even our great and affluent society of which much note has been made, but is inconceivable that either the amount or the sources thereof had not been previously considered before the Law was written! A conversion factor of $3.50 has been proposed for negotiation of Title XIX fees instead of the usual conversion factor of $5.00, the standard Blue Cross conversion factor. The Medical Society does not wish to accept what it considers a substandard rate of payment identified as a prevailing rate since this will adversely affect both present and future negotiations relative to both Title XVIII and Title XIX.

It took 30 years to implement Title XVIII. Title XIX may not take nearly so long, and the socialization of Medicine will then be complete!

Roland F. Schoen, M.D.
Editor

STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION
(Act of October 23, 1962, Section 4369, Title 39, United States Code)

Publisher: File two copies of this form with your postmaster.

1. DATE OF FILING: 9/22/66
2. TITLE OF PUBLICATION: ARIZONA MEDICINE
3. FREQUENCY OF ISSUE: MONTHLY
4. LOCATION OF KNOWN OFFICE OF PUBLICATION (Street, city, county, state, zip code): LEBEAU PRINTING CO., 2216 W. Granada Road, Phoenix, Arizona 85009
5. LOCATION OF THE HEADQUARTERS OR GENERAL BUSINESS OFFICES OF THE PUBLISHERS (Not printers): Suite 201, 4601 N. Scottsdale Road, Scottsdale, Arizona 85251
6. NAMES AND ADDRESSES OF PUBLISHER, EDITOR, AND MANAGING EDITOR

PUBLISHER (Name and address): THE ARIZONA MEDICAL ASSOCIATION, INC. 4601 N. Scottsdale Road, Scottsdale, Ariz. 85251

EDITOR (Name and address): Roland F. Schoen, M.D., 4601 N. Scottsdale Road, Scottsdale, Ariz. 85251

MANAGING EDITOR (Name and address): Bruce E. Robinson, 4601 N. Scottsdale Road, Scottsdale, Ariz. 85251

7. OWNER (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual must be given.)

NAME	ADDRESS
~~THE ARIZONA MEDICAL ASSOCIATION, INC.~~	~~4601 N. Scottsdale Road, Scottsdale, Arizona~~
NO STOCKHOLDERS – THIS IS A NON-PROFIT ORGANIZATION	

8. KNOWN BONDHOLDERS, MORTGAGEES, AND OTHER SECURITY HOLDERS OWNING OR HOLDING 1 PERCENT OR MORE OF TOTAL AMOUNT OF BONDS, MORTGAGES OR OTHER SECURITIES (If there are none, so state)

NAME	ADDRESS
NONE	

9. Paragraphs 7 and 8 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner. Names and addresses of individuals who are stockholders of a corporation which itself is a stockholder or holder of bonds, mortgages or other securities of the publishing corporation have been included in paragraphs 7 and 8 when the interests of such individuals are equivalent to 1 percent or more of the total amount of the stock or securities of the publishing corporation.

10. THIS ITEM MUST BE COMPLETED FOR ALL PUBLICATIONS EXCEPT THOSE WHICH DO NOT CARRY ADVERTISING OTHER THAN THE PUBLISHER'S OWN AND WHICH ARE NAMED IN SECTIONS 132.231, 132.232, AND 132.233, POSTAL MANUAL (Sections 4355a, 4356b, and 4356 of Title 39, United States Code)

	AVERAGE NO. COPIES EACH ISSUE DURING PRECEDING 12 MONTHS	SINGLE ISSUE NEAREST TO FILING DATE
A. TOTAL NO. COPIES PRINTED (Net Press Run)	2350	2350
B. PAID CIRCULATION 1. SALES THROUGH DEALERS AND CARRIERS, STREET VENDORS AND COUNTER SALES	-0-	-0-
2. MAIL SUBSCRIPTIONS	1750	1780
C. TOTAL PAID CIRCULATION	1750	1784
D. FREE DISTRIBUTION (including samples) BY MAIL, CARRIER OR OTHER MEANS	550	516
E. TOTAL DISTRIBUTION (Sum of C and D)	2300	2300
F. OFFICE USE, LEFT-OVER, UNACCOUNTED, SPOILED AFTER PRINTING	50	50
G. TOTAL (Sum of E & F—should equal net press run shown in A)	2350	2350

I certify that the statements made by me above are correct and complete. (Signature of editor, publisher, business manager, or owner)

POD Form 3526 Jan. 1963

The discomforts of
DIARRHEA
MUCOUS COLITIS
DIVERTICULITIS
SPASTIC URETERITIS
BLADDER SPASM
are relieved by direct musculotropic action with.....

Trocinate®
BRAND THIPHENAMIL HCl

Available in 100 milligram pink sugar-coated tablets.

The high therapeutic index permits dosage sufficient to relieve spasm promptly.

Administer 4 tablets every 4 hours until relief is constant, then adjust maintenance dosage.

Trocinate *BRAND* THIPHENAMIL HCl

Directly relaxes smooth muscle spasm
Combats hypermotility
Non-mydriatic, may be used in glaucoma

Sixteen years of clinical use, with absence of untoward effects, has established the safety and effectiveness of Trocinate.

Trocinate is metabolized in the body and completely eliminated, which is a safety factor. Dosage must be sufficient to maintain the therapeutic blood level.

DISPENSED IN BOTTLES OF
100, 250 AND 2000 TABLETS

Literature and samples sent upon request

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA
Manufacturers of ethical pharmaceuticals since 1856

SPECIMEN "A"

NOW! $ $ NOW!

ATTENTION!

FOR MOST NEW YORKERS, THE FINEST COMPLETE MEDICAL CARE IS NOW

FREE!

Effective immediately, THE MOUNT SINAI HOSPITAL is offering the full benefits of THE NEW YORK STATE MEDICAL ASSISTANCE PROGRAM (Title 19)

(Note: This is new and in addition to the Medicare Program of your Federal Government)

WHAT THIS MEANS TO YOU---

* Unless your income is considerably above the national average, the TOTAL COST of almost all the same excellent medical care, services and supplies that MOUNT SINAI offers to any patient, will be fully paid for by your State!
* To receive these benfits, you come directly to the Hospital.
* On your first visit, the Hospital will help you fill out one simple form. No other red tape.
* From now on, you are financially responsible only for your wife (husband) and children under 21 years old. YOU ARE no longer financially responsible for the medical expenses of your parents!

In the next column is a simplified explanation of this dramatic change in the traditional relationships between Patient, Doctor, Hospital and State.

If any part of it is not clear, please ask for assistance from any member of the MOUNT SINAI HOSPITAL Out-Patient Department.

IMPORTANT!

1. You do not have to be sick to apply for these benefits. After you apply, you will receive a special card. Then, if and when a member of your family needs medical aid, just bring your card to the Hospital.
2. The place to apply for your card is

THE MOUNT SINAI HOSPITAL

WHO MAY APPLY?

Any person, of ANY age, provided his family's "Net Income" is not greater than shown below:

	Number of Persons in Family							
	1	2	3	4	5	6	7	8
One wage earner in household	$ 2900	4000	5200	6000	6850	7700	8550	9400
Two wage earners	----	4850	6050	6850	7700	8550	9400	10250

Example: If there are six in your family, with two wage-earners, and the total "Net Income" is less than $8,550, you are entitled to complete coverage under this program.

WHAT IS "NET INCOME"?

This is your total income from all sources less Federal and State income taxes, Health Insurance premiums, and any payments ordered by a court.

You are covered even though you own a home, car, savings equal to half your allowed income above, Life Insurance up to $1000 for each member of your family, and basic personal property (clothing, furniture, tools, personal effects, etc.)

WHAT BENEFITS ARE INCLUDED?

--Services of qualified physicians, dentists, nurses, optometrists, podiatrists and related professionals.
--Care, treatment, maintenance and nursing services in hospitals, nursing homes, infirmaries, etc.;
--Home health care services, including nursing services and services of home aids;
--Out-patient hospital or clinic services;
--Drugs, sickroom supplies, eyeglasses, dentures, prosthetic appliances;
--Physical therapy, related rehabilitative services;
--Laboratory and X-ray services; and
--Transportation necessary to obtain care and services.

(Actual photographic reproduction of flyer)

SPECIMEN "B"

The Mount Sinai Hospital
100th STREET AND FIFTH AVE. • NEW YORK, N. Y. 10029

RECEIVED
JUL 29 1966
ARIZONA MEDICINE

July 22, 1966

Dr. Roland F. Schoen
Editor
Arizona Medicine
Post Office Box 128
Scottsdale, Arizona 85252

Dear Dr. Schoen:

Dr. Steinberg has asked me to reply to your letter of July 15.

You should be aware that the flyer was prepared for our clinic patients and was an attempt to speak to them in their own language. It was handed to our own patients and never was distributed outside the Hospital with our approval. However, persons politically opposed to this program have seen fit to distribute it widely without the courtesy of asking our permission. You might be interested in the form we presently are issuing, a copy of which is enclosed.

Since we see no purpose in further reproduction of a bulletin which already has served its internal usefulness, we would see little point in your distributing it further and adding to the misinterpretations which have arisen because of it.

Thank you for your interest.

Sincerely yours,

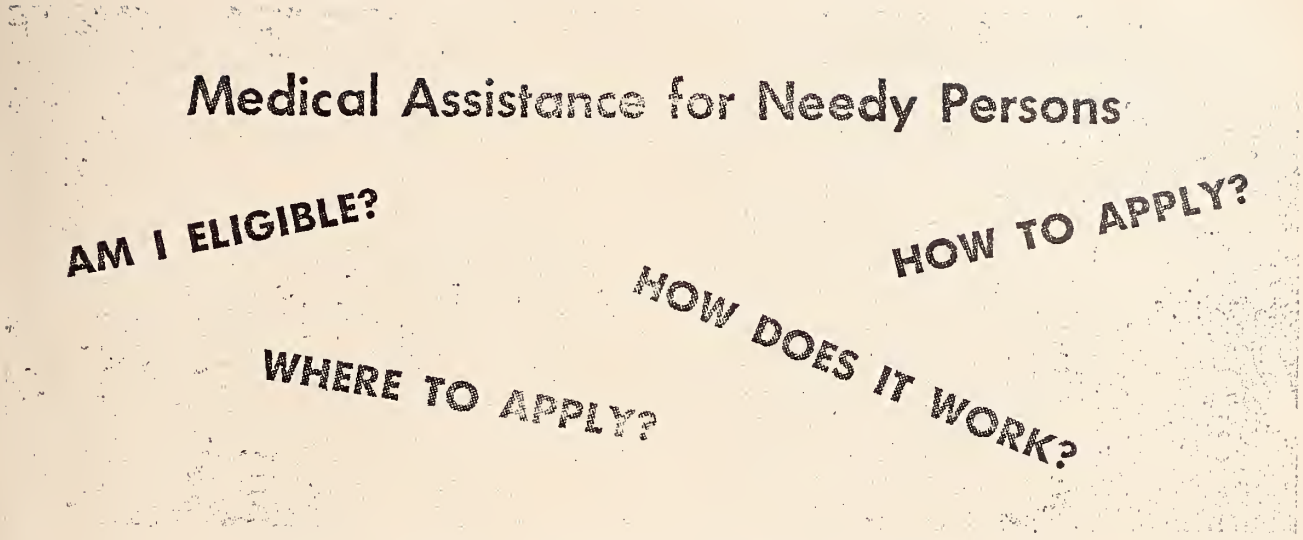
S. DAVID POMRINSE, M.D.
Associate Director

s

Enclosure

SPECIMEN "C"

Medical Assistance for Needy Persons



NOTE: MEDICAL ASSISTANCE FOR NEEDY PERSONS IS *NOT* MEDICARE

Medicare is a federal insurance program for persons 65 years of age and over. Beginning July 1, 1966, it will provide limited medical benefits without a means test. Information about the program can be obtained from local Social Security offices.

Medical Assistance for Needy Persons provides unlimited medical benefits for persons, regardless of age, who cannot pay for such services, as determined by a means test. Information about this program can be obtained from local public welfare departments in New York State.

WHY?

A serious problem for many individuals and families is the cost of medical care. As those costs rise, more and more people find they cannot meet them. Consequently they go without necessary medical attention, risking serious illness or disability, sometimes chronic illness.

Children, deprived of medical care because their parents cannot afford it, often become victims of conditions that impair their health and, later in life, limit their work capacities.

Lack of needed health care, in time, builds a great burden of illness and disability in the community, much or all of which becomes a welfare burden eventually. Today one-third of all public welfare expenditures in New York State and elsewhere in the Nation stems from sickness.

With a constantly increasing population and a constantly rising cost of health care, this situation has been growing worse. More and more individuals and families cannot pay for the medical care they require, especially people in the low-income and moderate-income groups, although they are able to support themselves otherwise.

To help these citizens avoid needless suffering and disability and to prevent them from becoming welfare recipients because of medical bills, New York State, in cooperation with the Federal Government and the localities, has established a program of Medical Assistance for Needy Persons.

WHAT?

Medical Assistance will pay the medical bills, in whole or in part, of New York State residents who can maintain themselves but who cannot meet the costs of medical care. While most of these individuals and families will be in the low-income or moderate income groups, others, facing catastrophic costs, may also be eligible for Medical Assistance.

These payments will be made to vendors (hospitals, physicians, dentists, and so forth) for the entire range of hospital, physician, dental, nursing, and all other health services, drugs, and appliances that may be required by the patient.

Welfare departments can pay vendors for unpaid medical services given to an eligible person during the three-month period prior to the month of application for Medical Assistance if the person cannot pay for those services.

The State Department of Health is responsible for assuring a high standard of health care for all recipients of Medical Assistance. As of November 1, 1966 it will administer all medical aspects of the program.

WHO ?

Whether a person or family qualifies for Medical Assistance depends on:
the amount of annual income
the amount of savings
the amount of life insurance
the amount of medical expense

First, there are three sets of exemptions to be considered: income, savings and life insurance. These are amounts of income and resources that need not be used to pay medical bills.

Here are the income exemptions:

NET ANNUAL INCOME EXEMPTIONS

(total income less income taxes and the cost of health insurance premiums)

Minimum Exemptions for Family Households in Which There Are Wage-Earners								
	Number in household dependent on the wage earner and family members for whom the earner is legally responsible, or has assumed responsibility.							
Persons in Household	ONE	TWO	THREE	FOUR	FIVE	SIX	SEVEN	EIGHT
One earner	$2,900	4,000	5,200	6,000	6,850	7,700	8,550	9,400
Two earners	—	4,850	6,050	6,850	7,700	8,550	9,400	10,250
Minimum Exemptions for Family Households in Which There Is No Wage-Earner But Existing Income (Social Security, Pension, Interest, Dividends, etc.)								
	$2,300	3,250	4,350	5,150	6,000	6,850		

SAVINGS EXEMPTIONS

Savings are exempted up to one-half of the annual net income (total income less income taxes and the cost of health insurance premiums). For example: a family with an annual net income of $6,000 is permitted to reserve $3,000 in savings. Any savings in excess of $3,000 would have to be used toward payment of medical bills—unless some of the savings were needed to establish burial reserves for members of the family without minimum insurance protection.

INSURANCE EXEMPTIONS

Life insurance with a face value of $1,000 (the amount paid in case of death) is exempt for each member of the family. Thus a family of four may have four $1,000-policies.

If any member of a family has an insurance policy with a face value in excess of $1,000, the loan value of the policy must be determined. If it has a loan value, the amount must be considered an asset, as savings are considered to be. Suppose the situation involves a policy with a loan value of $1,500. Suppose further that the family has an annual net income of $6,000 and has the maximum amount of savings exempted, $3,000. That would mean the family must use the $1,500 for medical expenses. However, if it had savings of only $1,000, the $1,500 would not have to be used for medical expenses because the $1,500 and the $1,000 would total only $2,500—or less than the family's savings exemption of $3,000.

Let's consider a different situation, one in which no life insurance exists. Under these circumstances, a burial reserve of $1,000 may be set aside for each member of the family from existing savings.

Example: a family of four has one insurance policy of $1,000 on the head of the household. The other three members have no insurance. But the family has savings of $4,000. It may set aside, as a burial reserve, $1,000 for each of the three members without insurance. That would reduce the savings to $1,000, which would be exempt from use to pay medical bills if it were one-half or less of the family's annual net income.

HOW?

It works like this. Take a family of four with one wage-earner, net income of $6,000, savings of $3,800, and a life insurance policy with a face value of $500 for each of its four members.

All of the $6.000 income would be exempt; none of it would have to be used to pay medical bills.

Since the family is entitled to life insurance protection of $1,000 for each of its four members, it could set aside from its savings $500 for each member to supplement the $500 policies. That cash set aside would total $2,000, leaving $1,800 in savings. That $1,800 would not have to be used to pay medical bills since it is less than half of the annual income.

A Note about Private Health Insurance:

No one should cancel his private health insurance protection because he thinks he may not need it under Medical Assistance for Needy Persons.

First, he had better make sure he is eligible for Medical Assistance before he takes any action.

Second, his eligibility for Medical Assistance will probably vary from time to time, depending upon his income and other resources; consequently a person who drops his personal health insurance may be eliminating his only means of paying for medical care he needs.

In an effort to encourage people to maintain personal health insurance for their own protection, payment of insurance premiums is taken into account in determining eligibility for Medical Assistance. Up to $275 yearly for payment of such premiums is excluded from calculating exempt income for a single person and $400 for a family.

Get the facts before dropping any life insurance. Term policies have no effect on eligibility. Assignment or cash surrender of your insurance is not required. Your welfare department will answer all your questions.

Other provisions:

Legally Responsible Relatives: Legally responsible relatives of a person in need of Medical Assistance are required to contribute to the person's support in so far as they are able to do so. Legally responsible relatives are husbands and wives, and parents of children under 21. Children are *not* legally responsible.

Liens on Property: No lien or encumbrance of any kind is required from, or will be imposed against, the property of any individual, prior to his death, because of Medical Assistance correctly paid or to be paid on his behalf.

There will be no adjustment or recovery of Medical Assistance payments correctly paid, except from the estate of an individual who was 65 years of age or older when he received such assistance, and then only after the death of his surviving spouse, if any, and only at a time when he has no surviving child who is under 21.

WHERE?

Application for Medical Assistance is made at the local department of public welfare, which is responsible for receiving and acting upon applications and certifying eligibility.

Application can be made in person, by mail, or by another person for the applicant.

The application form calls for necessary information on income, savings, and medical insurance. This information is supplied by the applicant and certified to by him.

If an application is denied by the local welfare department, the applicant may appeal to the New York State Department of Social Welfare for a review and a fair hearing. Decisions of the Department in all such cases are binding upon the local commissioner involved.

Identification cards are issued by local welfare departments for periods of six months for families with children under 21 years of age, and 12 months for families in which all members are over 21. These cards can be obtained by qualified applicants, certifying them for Medical Assistance in advance of any case of illness. The cards are renewable.

In addition to the medically needy citizens who qualify for payment of their medical bills in whole or in part, other groups will have their medical care paid for. These include all welfare recipients, eligible patients 65 years of age and over in State mental hygiene and tuberculosis hospitals, and Medicare beneficiaries who cannot pay the $40 deductible for hospitalization and other costs not covered by Medicare.

STATE OF NEW YORK
Nelson A. Rockefeller, *Governor*

STATE DEPARTMENT OF SOCIAL WELFARE
George K. Wyman, *Commissioner*

STATE BOARD OF SOCIAL WELFARE
Hugh R. Jones, *Chairman*

STATE DEPARTMENT OF SOCIAL WELFARE
112 State Street, Albany, New York 12201

FOR YOUR PERMANENT FILE



HANDSOME, DURABLE WHITE & GOLD VINYL COVERED BINDERS TO PRESERVE PAST ISSUES OF ARIZONA MEDICINE. EACH BINDER HOLDS UP TO TWELVE ISSUES.

ONLY $3.00 EACH

Arizona Medicine

4601 N. Scottsdale Rd., Scottsdale, Ariz., 85251

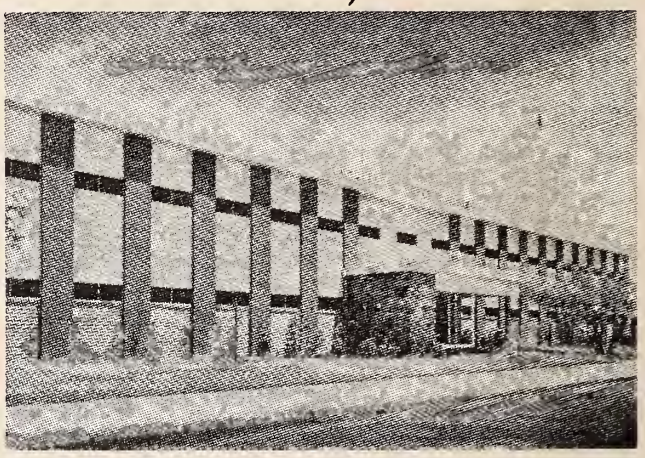
Name _____

Address _____

PLEASE SEND _____ BINDERS

I understand that these will be billed to me at the rate of $3.00 each.

HOSPITAL MEDICAL CENTER, LTD.



100 E. FOURTH ST. SCOTTSDALE, ARIZONA

Adjoining Scottsdale Baptist Hospital

ANESTHESIOLOGIST
Sue Boyett, M.D.
FAMILY DOCTOR
Jack E. Groh, M.D.
William B. McGahey, M.D.
John A. Martin III, M.D.
Edward A. Wilson, M.D.
GENERAL PRACTICE
Willard F. Worthen, M.D.
GENERAL SURGERY
Boyd H. Metcalf, M.D.
Jack O. McFarland, M.D.
GENERAL SURGERY – CANCER
Herbert N. Munhall, M.D.
INTERNAL MEDICINE & CARDIOLOGY
Donald L. Corzine, M.D.
John F. Currin, M.D.
OBSTETRICS & GYNECOLOGY
Roy O. Young, M.D.
OPHTHALMOLOGY
Peter S. Sykowski, M.D., F.A.C.S.
Robert L. Yockey, M.D.
eye physician and surgeon
ORTHODONTIST
James C. Toye, D.D.S.
ORTHOPEDIC SURGERY
Edward E. Conn, M.D.
Malcolm F. Dorfman, M.D.
Willard S. Hunter, M.D.
PATHOLOGY
Thomas B. Jarvis, M.D.
Fred C. Schoene, M.D.
PERIODONTIST
J. Richard Loughry, D.D.S.
PLASTIC SURGERY
Morris Barton, M.D.
THORACIC CARDIOVASCULAR SURGERY
Carl Impellitier, M.D.
UROLOGIC SURGERY
Wilfred M. Potter, M.D.
RADIOLOGY
M. Herbert Nathan, M.D.
DENTISTRY
Lumone E. Willmeng, D.D.S.
OTHERS
Jean Hoffman, Reg. Physical Therapist
Srutwa Pharmacy
Scottsdale Opticians

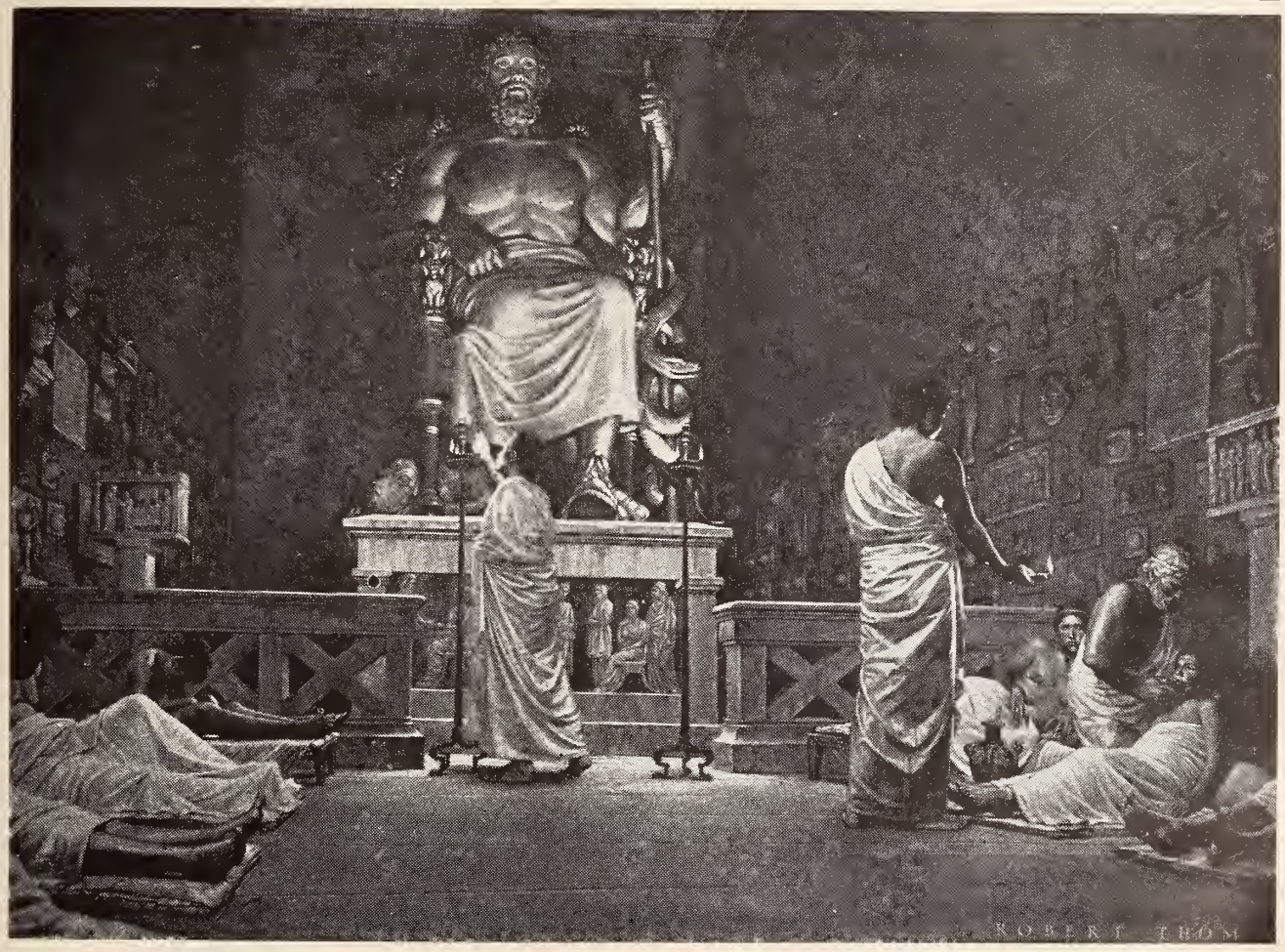
For Leasing Information Call
946-9091 or 946-5344

AESCULAPIUS AWARD PROGRAM

ALL ASSOCIATION MEMBERS ARE URGED TO ENTER

$200.00 CASH AWARD

Complete the application below before January 1st to be eligible for the MEAD JOHNSON COMPANY, INC. Aesculapius Award. This award with an engraved wall plaque will be presented to the exhibitors of the best scientific presentation at the 1967 Annual Meeting of this Association.



THE GOD AESCULAPIUS

Photo courtesy of Parke, Davis & Co. c 1957

SCIENTIFIC EXHIBIT APPLICATION FORM

PLEASE ACCEPT MY APPLICATION FOR ENTRY IN THE AESCULAPIUS AWARD PROGRAM BEING HELD AS PART OF THE 76TH ANNUAL MEETING OF THE ARIZONA MEDICAL ASSOCIATION, APRIL 26, 27, 1967.

I PROPOSE TO EXHIBIT:

.....

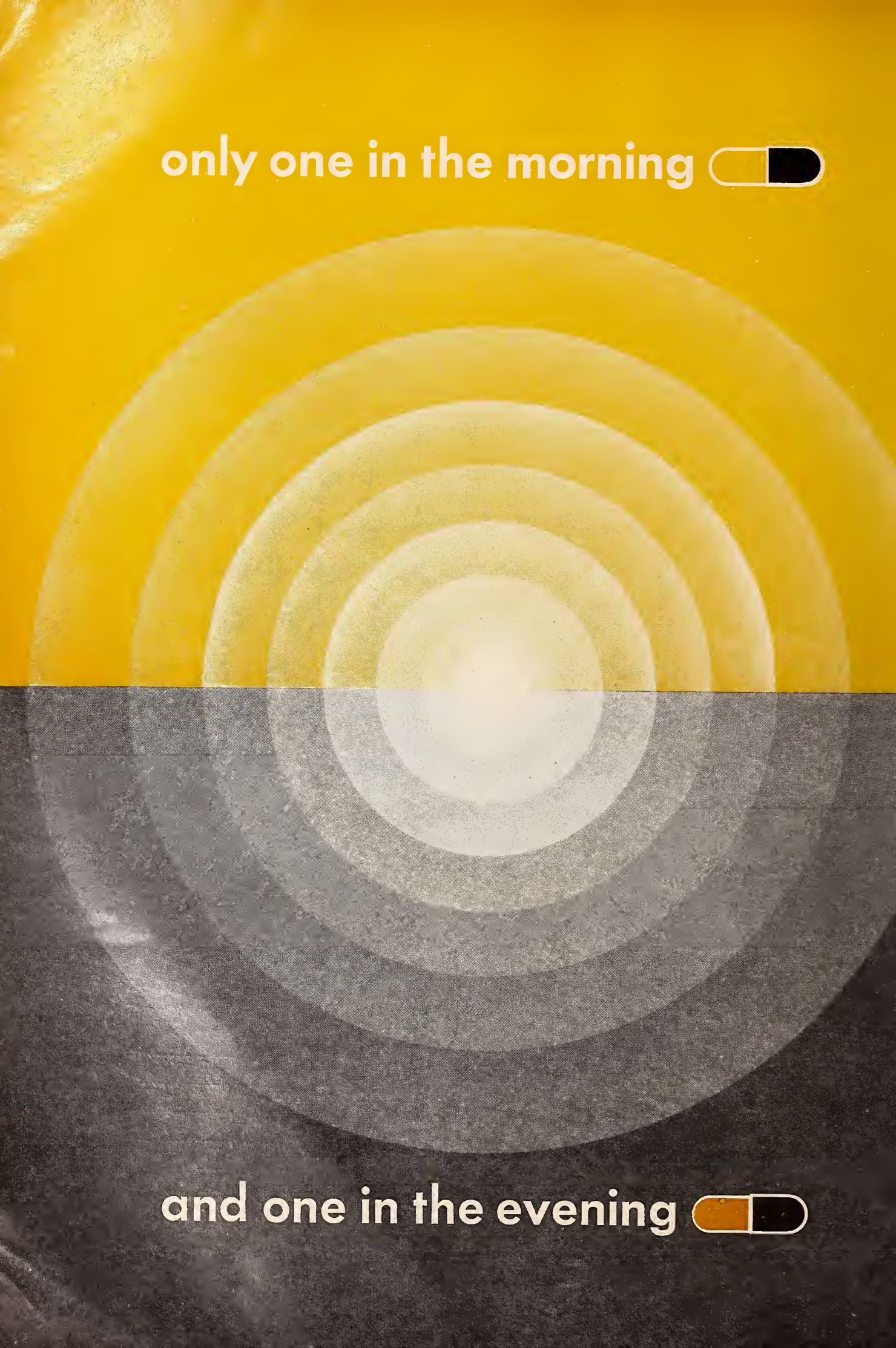
.....

Name:

Address

.....

I understand that further information may be requested on the acceptance of this application.


only one in the morning
and one in the evening

Now b.i.d. convenience plus even greater patient savings over q.i.d. tetracycline therapy

(plus all the advantages of tetracycline phosphate complex)

new Tetrex® bidCAPS*

(tetracycline phosphate complex)

Maximum patient savings. New bidCAPS now enable you to prescribe tetracycline in an even more economical, more convenient form. Your patient's prescription dollar gets maximum value: a daily bidCAPS dose is priced lower than any other leading brand of tetracycline—b.i.d. or q.i.d.

Well tolerated. Tetrex (tetracycline phosphate complex) is well tolerated. Gastrointestinal side effects are few; photodynamic reactions are extremely rare.

More of the active antibiotic in the blood. The basic tetracycline in Tetrex (tetracycline phosphate complex) is less bound to serum protein than is demethylchlortetracycline.[1] Result: Tetrex (tetracycline phosphate complex) provides a higher percentage of active antibiotic in the blood.

Available in bottles of 16 and 50.

BRISTOL

BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York

BRISTOL THERAPEUTIC SUMMARY: For complete information consult Official Package Circular. *Indications:* Infections of respiratory, gastrointestinal and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms. *Contraindications:* The drug is contraindicated in individuals hypersensitive to tetracycline. *Warnings:* Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood). *Precautions:* Mycotic or bacterial superinfection may occur. Infants may develop increased intracranial pressure with bulging fontanels. In gonorrheal therapy, serologic tests for syphilis should be conducted initially and monthly for 3 months. Adverse *Reactions:* Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis and allergic reactions may occur. *Usual Adult Dose:* 500 mg. b.i.d. Continue therapy for 10 days in beta-hemolytic streptococcal infections. Administer one hour before or two hours after meals.

Reference: 1. Roberts, C. E., Jr.; Perry, D. M.; Kuhns, H. A., and Kirby, W. M. M.: A. M. A. Arch. Int. Med. 107:204 (Feb.) 1961.

*bidCAPS is a trademark of Bristol Laboratories, Division of Bristol-Myers Company, for its brands of twice-a-day capsules. Each Tetrex bidCAP contains Tetrex (tetracycline phosphate complex) equivalent to 500 mg. tetracycline HCl activity.

DIRECTORY

THE ARIZONA MEDICAL ASSOCIATION, INC., Organized 1892, 4601 N. Scottsdale Road, Scottsdale, Arizona 85251.

OFFICERS AND DIRECTORS – 1966-67

President–Paul B. Jarrett, M.D. 2021 N. Central Ave., Phoenix, Arizona
President-Elect–Arnold H. Dysterheft, M.D. McNary Hospital, McNary, Arizona
Vice President–Arthur V. Dudley, Jr., M.D. Bldg. 23, Med. Sq., 1601 N. Tucson Blvd., Tucson, Arizona
Secretary–Charles E. Henderson, M.D. 909 East Brill Street, Phoenix, Arizona
Treasurer–Fred H. Landeen, M.D. 2222 North Craycroft Rd., Tucson, Arizona
Speaker of the House–Walter Brazie, M.D. P. O. Box 631, Kingman, Arizona
Editor-in-Chief–Roland F. Schoen, M.D. 1023 E. Florence Blvd., Casa Grande, Arizona
Delegate to AMA–Dermont W. Melick, M.D. 909 East Brill Street, Phoenix, Arizona
Delegate to AMA–William B. Steen, M.D. 116 North Tucson Boulevard, Tucson, Arizona
Alternate Delegate to AMA–Daniel T. Cloud, M.D. 2021 North Central Ave., Phoenix, Arizona
Alternate Delegate to AMA–Philip G. Derickson, M.D. 744 N. Country Club Rd., Tucson, Arizona

DISTRICT DIRECTORS

Central District–Jack E. Brooks, M.D. 2021 N. Central Ave., Phoenix, Arizona
Central District–Richard O. Flynn, M.D. 2210 S. Mill Ave., Tempe, Arizona
Central District–W. Shaw McDaniel, M.D. 461 W. Catalina Dr., Phoenix, Arizona
Central District–Robert A. Price, M.D. 3602 N. 15th Ave., Phoenix, Arizona
Central District–Noel G. Smith, M.D. 3614 N. 15th Ave., Phoenix, Arizona
Northeastern District–Harry S. Beckwith, M.D. East 2nd & Colorado Ave., Winslow, Arizona
Northwestern District–Hugh E. Dierker, M.D. 505 North Beaver Street, Flagstaff, Arizona
Southeastern District–Deward G. Moody, M.D. Stage Building, Nogales, Arizona
Southern District–Warren D. Eddy, M.D. 601 N. Wilmot Road, Tucson, Arizona
Southern District–Richard L. Dexter, M.D. 116 N. Tucson Boulevard, Tucson, Arizona
Southern District–Hermann S. Rhu, Jr., M.D. 5th & Alvernon Way, Tucson, Arizona
Southwestern District–Howard W. Finke, M.D. Magma Hospital, Superior, Arizona

SOCIEDAD MEDICA DE ESTADO UNIDOS DE NORTE AMERICA Y MEXICO

President.–Alfonso Topete Duran, M.D., Professor of Surgery Edificio Profesional, Guadalajara, Jalisco, Mexico
President-Elect–James Nauman, M.D. 1603 N. Tucson Blvd., Tucson, Arizona
Vice President–Eduardo Gonzalez Murguia, M.D. Prisciliano Sanchez–1081 Guadalajara, Jalisco, Mexico
Secretary for the United States–Robert A. Witzeman, M.D. 222 West Osborn Road, Phoenix, Arizona 85013
Secretary for Mexico–Felix Michel Alatorre, M.D. Munguia–816, Guadalajara, Jalisco, Mexico
Treasurer for the United States–Lucy A. Vernetti, M.D. 333 West Thomas Road, Phoenix, Arizona 85013
Treasurer for Mexico–Jorge E. Riggen Davila, M.D. Parroguia 138, Guadalajara, Jalisco, Mexico
Exec. Secretary for the United States–Mrs. Virginia E. Bryant 333 West Thomas Road #207, Phoenix, Arizona 85013
Executive Secretary for Mexico–Mr. Alfredo Patron Venus #51 Sur, Mazatlan, Sinaola, Mexico

COMMITTEES – 1966-67

NOTE: The President, President-elect and Secretary are ex-officio members of all Committees unless otherwise specified.

ARTICLES OF INCORPORATION & BY-LAWS COMMITTEE: Walter Brazie, M.D., Chairman (Kingman)

BENEVOLENT & LOAN FUND COMMITTEE: Daniel T. Cloud, Jr., M.D., Chairman (Phoenix)

CENTRAL OFFICE ADVISORY COMMITTEE: Charles E. Henderson, M.D., Chairman (Phoenix)

GRIEVANCE COMMITTEE: William B. Steen, M.D., Chairman (Tucson)

HISTORY & OBITUARIES COMMITTEE: Robert S. Flinn, M.D., Chairman (Phoenix)

INDUSTRIAL RELATIONS COMMITTEE: Derald G. May, M.D., Chairman (Phoenix)

LEGISLATIVE COMMITTEE: Carlos S. Craig, M.D., Chairman (Phoenix)

MEDICAL ECONOMICS COMMITTEE: Ian M. Chesser, M.D., Chairman (Tucson)

PROCUREMENT & ASSIGNMENT COMMITTEE: Joseph M. Greer, M.D., Chairman (Phoenix)

PROFESSIONAL COMMITTEE: William G. Payne, M.D., Chairman (Tempe)

PUBLIC RELATIONS COMMITTEE: Arthur V. Dudley, Jr., M.D., Chairman (Tucson)

PUBLISHING COMMITTEE: Roland F. Schoen, M.D., Chairman (Casa Grande)

SCIENTIFIC ASSEMBLY COMMITTEE: Edward Sattenspiel, M.D., Chairman (Phoenix)

COUNTY MEDICAL SOCIETY OFFICERS, 1966

APACHE: W. Duncan Spining, M.D., President, Sage Memorial Hospital, Ganado; Ellis W. List, Jr., M.D., Secretary, McNary Hospital, McNary.

COCHISE: Raymond Grossman, M. D., President, Drawer 1059, Douglas 85607; Jorge Gaytan, M.D., Secretary, Drawer S. Douglas.

COCONINO: Hugh E. Dierker, M.D., President, 505 N. Beaver Street, Flagstaff; R. T. McDonald, M.D., Secretary, 713 N. Beaver Street, Flagstaff.

GILA: David B. Gilbert, M.D., President, Physicians & Surgeons Clinic, Payson; Alford D. Musgrave, Jr., M.D., Secretay, 703 Ash Street, Globe.

GRAHAM: John H. Walker, M.D., President, 702 8th Avenue, Safford.

GREENLEE: Gerhard L. Ihm, M.D., President, Phelps Dodge Hospital, Morenci; James W. Gilbert, M.D., Secretary, P. O. Box 1537, Clifton.

MARICOPA: Ray Fife, M.D., President, 2620 N. 3rd Street, Phoenix; Charles H. Finney, M.D., Secretary, 555 W. Catalina Dr., Phoenix.
(Society Office – 2025 North Central Avenue Phoenix)

MOHAVE: John G. Lingenfelter, M.D., President, 412 E. Oak Street, Kingman; John J. Standifer, M.D., Secretary, 412 E. Oak Street, Kingman.

NAVAJO: Claude H. Peterson, M.D., President, 1500 Williamson Ave., Winslow; Leo L. Lewis, M.D., Secretary, Santa Fe Medical Offices, P. O. Box 673, Winslow.

PIMA: Darwin W. Neubauer, M.D., President, 720 N. Country Club Drive, Tucson; Seymour A. Shapiro, M.D., Secretary, Bldg. 24, Med. Square, 1601 N. Tucson Blvd., Tucson.
(Society Address: 2555 East Adams Street, Tucson)

PINAL: Chalmers D. Johnson, M.D., President, 1195 N. Arizona Blvd., Coolidge; Richard F. Adamson, M.D., Secretary, Florence Medical Center, Florence.

SANTA CRUZ: Charles S. Smith, M.D., Secretary, Gebler Building, Nogales.

YAVAPAI: Dennis R. Semkin, M.D., President, 533 W. Gurley Street, Prescott; William R. Shepard, M.D., Secretary, 1003 Division Street, Prescott.

YUMA: James Volpe, Jr., M.D., President, P. O. Box 1151, Harold N. Gordon, M.D., Secretary, 1832 8th Avenue, Yuma.
(Society Address – P. O. Box 4370, Kofa Substation, Yuma)

WOMAN'S AUXILIARY TO THE ARIZONA MEDICAL ASSOCIATION – 1966-67

President Mrs. Robert G. Delph (Grace)
2019 North Crescent Drive, Flagstaff, Arizona

President-Elect Mrs. Elvie B. Jolley (Mila)
Box 919, Bisbee, Arizona

1st Vice President Mrs. Richard Hardenbrook (Kaaren)
316 Grove Avenue, Prescott, Arizona

2nd Vice President Mrs. Charles Matheus (Marilyn)
2148 East 25th Street, Yuma, Arizona

Secretary Mrs. Richard Timmons (Evelyn)
5302 N. 69th Place, Scottsdale, Arizona

Treasurer Mrs. James Parsons (Carolyn)
5251 E. Hawthorne Pl., Tucson, Arizona

Director Mrs. James B. Tucker (LaVerne)
700 East 10th Street, Casa Grande

AD HOC COMMITTEE ON FEDERAL SERVICES

Meeting of the Ad Hoc Committee on Federal Services of The Arizona Medical Association, Inc., held Sunday, September 18, 1966, in Suite 201, 4601 North Scottsdale Road, Scottsdale, Arizona, convened at 10:15 a.m., William B. Steen, M.D., Chairman, presiding.

Roll Call

PRESENT: Drs. Caldwell, Hayes W.; Dysterheft, Arnold H., President-Elect; Henderson, Charles E., Secretary; Jarrett, Paul B., President; Neubauer, Darwin W.; Reed, Wallace A.; Spendlove, George A., Commissioner, Arizona Health Department; Steen, William B., Chairman.

STAFF: Messrs. Carpenter, Robert, Executive Secretary; Robinson, Bruce E., Assistant Executive Secretary.

GUESTS: Messrs. Blazek, James J., Aetna Life Insurance Company; Whaley, Dallas F., AMA Field Representative.

EXCUSED: Drs. Kemberling, Sidney R.; Ochsner, Albert J.; Yount, Jr., Clarence E.; Mr. Jacobson, Edward, Counsel.

Minutes

The minutes of the meeting of June 19, 1966, were approved as presented.

Review Committee Appointments

The following Review Committee Chairmen were designated:

CENTRAL — George H. Mertz, M.D. (Phoenix).

SOUTHERN — Darwin W. Neubauer, M.D. (Tueson) (Replacing W. R. Manning, M.D.)

The following review committee members were appointed:

SOUTHEASTERN — Cochise — Charles W. McMoran, M.D. (GP); Graham — Bruce N. Curtis, M.D. (GP); Greenlee — Carl H. Gans, M.D. (GS); Santa Cruz — Stephen A. Letourneaux, M.D. (GP).

Advisor — Consultants Appointments

The following Advisor-Consultants were designated:

Cochise — Guy B. Atonna, M.D. (GP-GS); William W. McKinley, M.D. (GP-ANES); Graham — Doran V. Porter, M.D. (GP); John H. Walker, M.D. (GP); Greenlee — Gerhard L. Ihm, M.D. (GP); Maricopa — Lee Foster, M.D. (R); Santa Cruz — Zenas B. Noon, M.D. (GS); Yuma — William H. Lyle, M.D. (GP).

Field Visitation Program

Mr. Robinson reported on his recent visitations with members of the Association as follows:

On the first of August he started a tour of the State visiting with the doctors in the various towns with the purpose of discussing the Medicare law and other Federal legislation which is pending implementation. He was joined on this visitation by Mr. Dallas Whaley, AMA Field Service Representative. Following is a list of towns visited:

Clifton, Cottonwood, Grand Canyon, Holbrook, Kingman, McNary, Morenci, Phoenix, Prescott, Safford, Show Low, Springerville Tucson, Wickenberg, Williams, Winslow.

He pointed out that with the exception of Phoenix and Tucson, between 80% and 100% of the doctors in each town attended the meetings. The percentage of attendance in Phoenix was about 20% and Tucson 35%.

He pointed out that there exists a great range of interest and understanding of the Medicare law. However, there seems to be a growing interest in future legislation and particularly in Title XIX.

Mr. Robinson made the following recommendations:

1. That the visitation program continue to all towns not previously visited.
2. That very close liaison be developed with BC/BS.
3. That the liaison established with Aetna be developed further.
4. Establish a close liaison with the State Health and Welfare Departments.
5. That Mr. Robinson be invited to sit in as an observer at the advisory committee on Heart, Cancer, Stroke legislation.
6. That he should sit in on all legislative committee meetings, not as a lobbyist, but purely as an observer.
7. That another visitation program be planned for a later date, perhaps in six to eight months, for the purpose of ascertaining the situation at that time.

It was regularly moved and passed that the above recommendations be approved.

It was suggested that a member of the Health Department be invited to go along on future visitations.

Mr. Dallas Whaley, AMA Field Representative, commented on the visitation trip and thanked the Committee for letting him participate in the program.

Newsletter

It was reported that a newsletter, originally conceived by the Public Relations Committee, would be forthcoming and that this committee would utilize it as a means of distributing information.

Title XIX

Considerable discussion ensued on the need for close attention to the progress of Title XIX. It was agreed that the Association should provide the leadership in the State for implementation of Title XIX.

It was moved and carried that the following subcommittee be appointed to direct its attention exclusively to Title XIX and to make recommendations:

Drs. Reed, Wallace A., Chairman
Spendlove, George A.
Yount, Clarence E.

A fourth member would be appointed at a later date.

It was moved and carried that the President of the Association direct a letter to the Governor of the State advising him that this Association has studied Title XIX and would be most willing to assist in its implementation in any way possible.

Mr. Robinson showed the film strip on Title XIX as provided by the AMA and the American Society of Internists.

Carrier — Aetna Life Insurance Co.

Mr. Jim Blazek, Aetna Life Insurance Co., commented on his operation as follows:

1. Claims filed have increased from 800 in July to 4800 in August.
2. During the first month, the ratio between assignment and direct billing was about 60% assignments

and 40% direct billing. Mr. Blazek agreed that he would take spot samples of the claims in the future and would report to the committee at its next meeting.

3. Very few fee problems have arisen. Those that have arisen have been settled with the doctor in most cases. Advisor-consultants have been used about a dozen times to date.
4. It is taking about two weeks to process claims. It is hoped that this will be reduced to a week in the near future.
5. The matter of the hospital based physician remains a serious problem. About 2000 claims of this type are unpaid. The procedure to clear this log-jam is currently underway.
6. Only 20% of the claims, where a fee profile does not exist, have to be verified with the doctor as to whether the fee is his usual and customary.

It was recommended that Dr. Arthur Present be asked to attend future meetings of the committee to represent the hospital based physicians.

Mr. Blazek stated that a man is sent to Tucson each week to resolve problems arising in that area. A program of specific times would be prepared so that doctors in Tucson would have regularly scheduled access to this man.

Title XVIII — Part A

Dr. Caldwell reviewed the current U. R. Committee activities as they relate to compensation of U. R. Committee members.

Office of Economic Opportunity

Discussion of the activities of the OEO ensued in some detail with particular emphasis on the health aspects of the various programs.

Dr. Caldwell suggested that BC/BS be asked to invite Mr. Robinson to sit in on any future negotiations that they might have with the OEO when such negotiations involve the provision of medical services.

It was recommended that a letter be directed to the various county societies from the President of the Association to advise them of the OEO health programs and to invite interest from the various areas.

Mr. Robinson reported on the "Head Start" program in Maricopa County as it relates to BC/BS. He also reported on a LEAP meeting he attended which was explaining ways of providing health care to those living in the "inner city" (south Phoenix).

Mr. Robinson was directed to become very familiar with the statewide OEO organizations and report back at future meetings.

P.L. 89-239 — Heart Disease, Cancer, Stroke

Dr. Neubauer advised the committee that he and Dr. Carl R. Bjorklund have been appointed to represent the Association on the Regional Advisory Committee.

The Department of Health is currently working on the grant application for the committee. It was suggested that Mr. Robinson assist in this project. It was also suggested that Mr. Robinson sit in on future meetings of this Advisory Committee as an observer.

Communications

Letters were received by Dr. Ray Fife, President, Maricopa County Medical Society, and Dr. Richard L. Dexter, Program Chairman of St. Joseph's Hospital, Tucson, thanking the committee for the excellent visitation program that it had started.

Other Business

Roche Laboratories Proposal.

It was moved and carried that this committee recommend to the Board of Directors that a letter be written from this Association to the President of Roche explaining our view on their program of providing drugs to Medicare patients at reduced rates.

Fee Schedule Survey.

It was moved and carried that the Fee Schedule Survey prepared by Dr. Hayes Caldwell be sent to 10% of the Association members on a one-time basis. Said questionnaire to be accompanied by a cover letter from the Association president.

MEETING ADJOURNED 1:45 P.M.

Charles E. Henderson, M.D.
Secretary

ArMA LIAISON COMMITTEE WITH THE ARIZONA HOSPITAL ASSOCIATION

Meeting of the Liaison Committee with the Arizona Hospital Association of The Arizona Medical Association, Inc., held Sunday, September 25, 1966, in the Central Office of ArMA, Suite 201, Safari Building, 4601 North Scottsdale Road, Scottsdale, Arizona, convened at 2:00 p.m., Melvin L. Kent, M.D., Chairman, presiding.

Roll Call

PRESENT: Drs. Henderson, Charles E., Secretary; Jarrett, Paul B., President; Kent, Melvin L., Chairman; Melick, Dermont W.; Price, Robert A.

STAFF: Messrs. Carpenter, Robert, Executive Secretary, ArMA; Robinson, Bruce E., Assistant Executive Secretary, ArMA.

EXCUSED: Drs. Dudley, Jr., Arthur V.; Dysterheft, Arnold H., President-Elect; Lawrence, Jr., Howard C.; Lesemann, Frederick J.

House Resolution No. 15

The Chairman, Dr. Kent, called the meeting to order for the purpose of discussing the provisions of House Resolution No. 15, adopted, as amended, April 30, 1966, the Arizona Medical Association being recorded as voting to importune and request the responsible hospital officials to provide adequate representation by physicians, such as the chief of staff and/or physicians duly elected by the medical staff, on the board of directors of each hospital. A committee was appointed from the membership of ArMA to meet with a similar committee of the Arizona Hospital Association for discussion and implementation of the Resolution. The membership of the latter committee has been reported to include the following: Frank J. Dunning, First Vice President — AHA, Administrator — Camelback Hospital, Phoenix; Arnold H. Dysterheft, M.D., Past President — AHA, McNary (Ex Officio); Donald J. Hinnen, Executive Director &

Secretary — AHA, Phoenix; Charles Kannard, President — AHA, Administrative Officer — USPHS Indian Hospital, Phoenix; Joseph Prekup, President-Elect — AHA, Administrator — St. Luke's Hospital, Phoenix; and Don Zuercher, Second Vice President — AHA, Administrator — Northwest Hospital, Glendale.

Dr. Kent expressed the belief in the purpose of the Committee and the objective intended to be accomplished. He feels that Doctors of Medicine have a legitimate right to be on Hospital Boards, stating that there are hundreds of hospitals where physicians are serving on such boards and there are those in the minority, of course, that have no such representation. Physicians should be appointed in a minority capacity in order that their views may be heard.

Dr. Dysterheft, regrettably absent, urged the Committee to give serious thought to the necessity of developing an agenda before meeting with the Hospital Liaison Committee, rather well organized from the professional viewpoint, and circulated among the membership of the hospital committee in advance of the calling of a joint meeting. This will afford each group to give serious thought to the subject or subjects to be discussed, and then each would come prepared therefor. This will result in a more satisfactory meeting and avoid the errors of the past when, in his opinion and observation, medical committees have appeared before the hospital group not too well prepared, resulting in stalemate.

Lengthy discussion ensued as to the pros and cons of physician membership on hospital boards with or without the right to vote. It is the opinion that members of hospital boards generally do not know of the interest of doctors and their insistence upon becoming members of their bodies.

It was determined to call a joint meeting of the respective Liaison Committees to be held at 2:00 p.m., Saturday, November 5, 1966, at the Safari Hotel, Scottsdale, Arizona. To this meeting there shall be invited Board of Trustees' Presidents of Arizona Hospitals, urging attendance and suggesting, in the event of inability of a President to be present, that he designate another Board member as his representative.

The following suggested agenda was adopted:

1. Welcome and Opening Remarks — by the Chairman, Dr. Kent.
2. Expression of appreciation in behalf of the members of this Association, our Patients and the Community for services contributed by the members of the hospitals Boards of Trustees, and the desire of the Association to offer even more help to assist them in their work — by the President, Dr. Jarrett.
3. Presentation of Resolution No. 15; comments with regard to intent and purpose of the House in its adoption; and appointment of the Liaison Committee to represent the Association in its implementation — by Dr. Price.
4. Presentation of request of the Association that a bona fide member of the medical staff be elected to voting membership of each hospital Board of Trustees to assist it in serving the public and the hospital in assuming its legal liabilities; and exploring the corporate structure to achieve the objective — by Dr. Melick.

AMA House Resolution No. 14

Dr. Melick reviewed the action of the Reference Committee on Insurance and Medical Services and that of the AMA House of Delegates during its annual meeting in Chicago, June last, pertaining to Resolution No. 14, introduced by the Arizona Delegation, pertaining to physician members on Boards of Directors of hospitals. Pertinent statements in the "Standards" and the "Bulletins of the Joint Commission on Accreditation of Hospitals" were also noted. The AMA House adopted the following substitute resolves:

"**Resolved,** that it be the policy of the AMA: that hospital governing boards be urged to include physicians in their membership; that, also other appropriate representatives of hospital medical staffs should attend and participate in the meetings of hospital governing boards, but that the mode of this participation be a matter for local determination; and be it further

"Resolved, that state and local medical societies be urged to seek the cooperation of their respective hospital associations to implement this policy."

MEETING ADJOURNED AT 4:25 P.M.

Charles E. Henderson, M.D.
Secretary

BENEVOLENT AND LOAN FUND COMMITTEE

Meeting of the Benevolent and Loan Fund Committee, of The Arizona Medical Association, Inc., held Sunday, October 2, 1966, in the Central Office of the Association, Suite 201, Safari Building, 4601 North Scottsdale Road, Scottsdale, Arizona, convened at 10:05 A.M., Daniel T. Cloud, M.D., Chairman, presiding.

Roll Call

PRESENT: Drs. Buffmire, Donald K.; Cloud, Daniel T., Chairman; Dysterheft, Arnold H., President-Elect; Henderson, Charles E., Secretary; Jarrett, Paul B., President; Neubauer, Darwin W.

STAFF: Messrs. Carpenter, Robert, Executive Secretary; Robinson, Bruce E., Assistant Executive Secretary.

GUEST: Mr. Mislicky, Roman G., Assistant Vice President, Manager — Professional Services Division, Valley National Bank.

EXCUSED: Drs. Landeen, Fred H., Treasurer; Ochsner, Albert J.

Minutes

Approved minutes of the meeting of the Benevolent and Loan Fund Committee held February 6, 1966, as printed and circulated among the members.

Financial Report

VNB Trust Account No. 120-03068 reflects a cash balance as of August 31, 1966, of $27,217.32. Outstanding loan balance as of August 31, 1966, of $10,710.16.

VNB Trust Account No. 170-04714 reflects a cash balance as of September 15, 1966, of $8,957.08. On the basis of the VNB conversion factor of 12.5, amount available for loans: $111,963.50. Loans authorized to September 15, 1966: current amount outstanding — $95,414.85; amount authorized but not discharged: $7,450.00; total commitment: $102,864.85. Maximum available to loan as of September 15, 1966: $9,098.65.

On the basis of authorization of the Board of Directors, November 24, 1963, "that the total amount of the then outstanding student loans to which the Association's guarantee would apply, would at no time exceed sixty-five percent (65%) of the then total budget," and subsequent action of said Board, February 20, 1966: "that the loan limitation be now placed by the Board to be equal to the amount of sixty-five percent (65%) of the annual budget, plus an amount as determined by current accounting sufficient to cover the transfer of loans from the old Trust to the new Trust," the budget for 1966 being $196,160.00, such maximum authorization, as of 1966, would be $127,504.00. To this amount shall be added $21,978.80 representing transfer of loans from VNB Trust No. 120-03068, resulting in a maximum authorized for loan purposes of $149,482.80. Taking into account the sum of $102,864.85 representing loans authorized to September 15, 1966, a total sum of $46,617.95 represents the maximum authorized to loan as of September 15, 1966. This latter sum is, of course, subject to available funds. It was pointed out that on authority of the Executive Committee of the Board of Directors, a sum of $1,000.00 was transferred from the Scholarship Fund to VNB Trust No. 170-04714, September 16, 1966. For the record, the following loans were transferred from VNB Trust No. 120-03068 to No. 170-04714:

Name	Date
Belsher, Leslie J.	2/11/66
DeLeeuw, Neil A.	2/11/66
Frazer, Charles A.	3/24/66
Lawson, Jr., Wm. A.	4/ 1/66
Rich, J. Ronald	8/23/66
Schooler, Richard A.	2/ 9/66

Funds available for Scholarship grants, as of September 15, 1966, total $10,129.40. Such authorized grants are limited to $500.00 per student applicant.

Benevolence Account

For the record, the loan of $900.00 granted Delbert W. Hess, M.D. (Deceased), and Josephine T. Hess (his wife), dated August 11, 1965, was repaid April 6, 1966, with interest totaling $935.85.

Authorized Loan Adjustments

Authorized cancellation of the following unused portions of loans previously granted, for accounting purposes:

HERRERA, Maria D. — loan granted in the sum of $400.00 under date of September 24, 1965. Transaction not consummated.

STEWART, James N. — loan granted in the sum of $800.00 under date of September 9, 1965. Transaction not consummated.

Medical Student Loan Obligation Projection

At the request and for the benefit of the members, the following medical student loan obligation projection as of September 15, 1966, was presented:

FOUR-YEAR MAXIMUM

To ensure a $1,500.00 loan for each year until graduation from medical school:

Funds required $75,000.00
Increase in Reserve required $66,201.35

FIVE-YEAR MAXIMUM

To ensure a $1,500.00 loan for each year until completion of internship:

Funds required $123,000.00
Increase in Reserve required $114,201.35

SEVEN-YEAR MAXIMUM

To ensure a $1,500.00 loan for each year until completion of two years of residency:

Funds required $243,000.00
Increase in Reserve required $234,201.35

NOTE: It should be pointed out that a deposit of $3,705.44 at this time will yield $46,318.00 in new loanable funds, which is the maximum possible under ArMA 65% limitation until significant repayments develop.

Medical School Loans and Scholarships

By letter dated September 20, 1966, the Chairman, Dr. Cloud, communicated with each member pointing out that possibly the most important matter to be discussed at this meeting will be the financial situation of the medical student loan and scholarship programs. Each was requested to give serious thought thereto and come prepared for discussion. The Committee gave serious and lengthy consideration to each of these programs. In the absence of Dr. Landeen, his letter of September 29, 1966, setting forth his views was presented and read.

It was moved by Dr. Neubauer, seconded by Dr. Buffmire, and unanimously carried that it be the recommendation of this Committee to the Board of Directors that guaranteed medical student loans be extended to qualified applicants for a maximum period of four (4) years, limited to the time they are in medical school; and that the Board of Directors be requested to increase the loan limitation previously fixed by it to seventy-five percent (75%) of the annual operating budget; and that the Board of Directors be further requested to make available (each year) to the medical student loan guarantee fund any funds remaining in the scholarship fund, after awards, such funds to be made available for secondary medical student loans.

VNB Interest Rate Increase

The Valley National Bank, Phoenix, Arizona (Trustee — Account No. 170-04714), by letter dated September 15, 1966, in accordance with Loan Guarantee Plan Agreement dated February 9, 1964, called attention to a drastic change in the money market in relation to both the discount and prime rate now being charged. It was pointed out that unfortunately, under the circumstances,

it is necessary to increase the interest rate to be charged borrowers under the terms of our agreement from 6% to 6½% per annum. Such increase is to be effective as of October 3, 1966.

It was determined to refer the matter to the Board of Directors for its consideration.

Medical Student Loan Repayments

The following medical student loans were paid in full with interest during the period February 6, 1966, to date:

Name	Date of Loan
Comer, Paul B.	9/1/60
Comer, Paul B.	10/5/61
Mauk, III, Sid	2/7/61
Gibbs, Eugene C.	2/2/65

It was previously reported that the medical student loan in the sum of $1,400.00 granted Robert Stephen Young, March 1, 1965, was in default, Mr. Young having left the University of Colorado School of Medicine prior to the completion of his first year. He is now a student at the University of Arizona pursuing a course in psychology. Mr. Mislicky reported that arrangements have been made for repayment.

Medical Student Loan Applications For Review

Following review of applications, the following medical student loans were granted: (a) Kelly Kaesler (Sophomore), University of Tennessee — $1,400.00; (b) James J. Murphey, III (Sophomore), UCLA — $900.00, pending favorable completion of investigation; (c) Larry E. Rork (Freshman), University of Colorado — $1,500.00, pending enrollment certification; (d) John Nicholas Udall, Jr. (Sophomore), Temple University — $1,500.00, pending favorable completion of investigation; (e) David F. Mobley (Sophomore), University of Tennessee — $1,500.00.

Scholarship Applications For Review

Following review of applications, the following scholarships ($500.00 each) were awarded: (a) Roy W. Buterbaugh (Tempe), graduate of ASU, to attend the University of Colorado; (b) J. William Fitz (Tucson), graduate of U of A, to attend the University of New Mexico; (c) Timothy J. Hurley (Tucson), graduate of U of A, to attend the University of California (San Francisco); (d) Robert Lawrence (Tucson), graduate of U of A, to attend the University of New Mexico; (e) Hollis Phillips (Douglas), graduate of U of A, to attend Baylor University; (f) Cyril James Statt (Phoenix), graduate of Boston College, to attend New York State University; and (g) Dave Leroy Stevig (Phoenix), graduate of the University of Southern California, to attend Northwestern University.

Medical Student Loan Fund Contributions

It was regularly moved and unanimously carried that this Committee recommend to the Board of Directors that it publicize amongst the various potential sources of contributors, the medical student loan fund program to make them acquainted with the existence of such program and encourage contributions if they so desire.

MEETING ADJOURNED AT 1:00 P.M.

Charles E. Henderson, M.D.
Secretary

MEDICINE IN TERRITORIAL ARIZONA

by

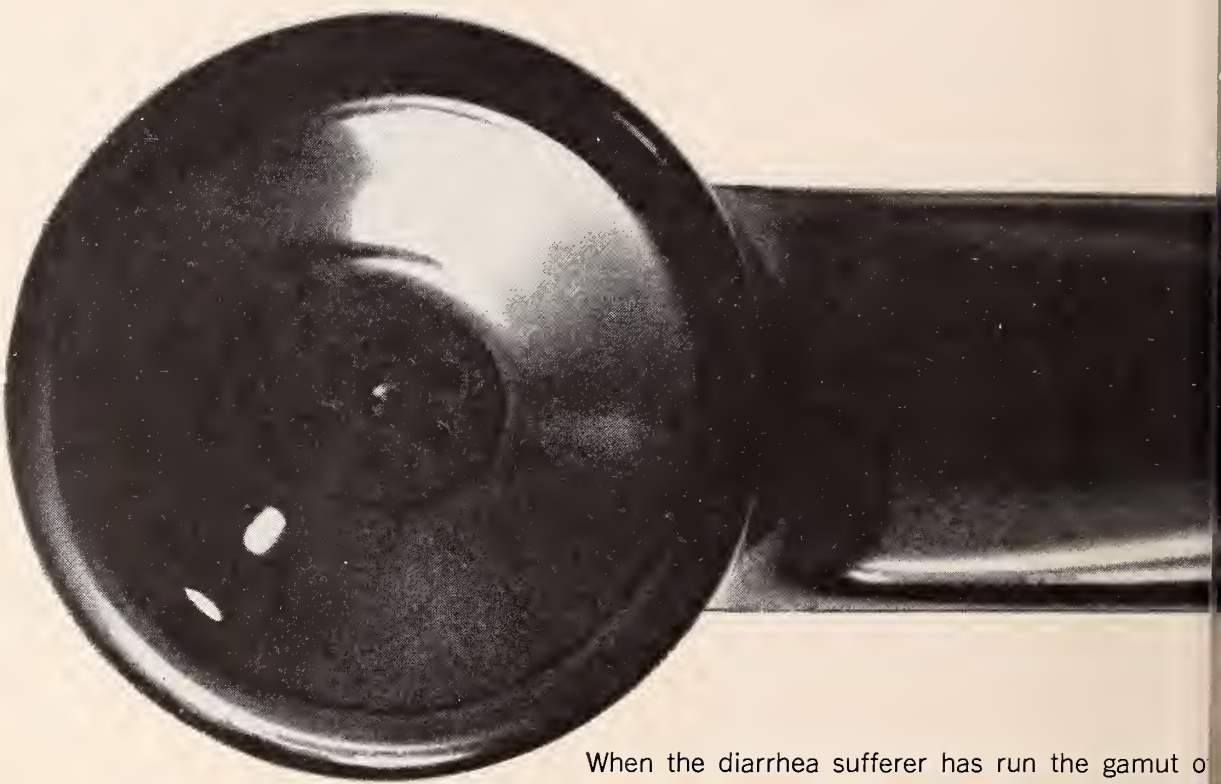
Frances E. Quebbeman

Limited Number of Autographed Copies Now Available

$7.50 each

Arizona Medical Association
4601 N. Scottsdale Road
Suite 201
Scottsdale, Arizona 85251

When uncontrolled diarrhea brings a call for help



When the diarrhea sufferer has run the gamut o home remedies without success, pleasant-tastin CREMOMYCIN can answer the call for help. It can be counted on to consolidate fluid stools, soothe intes tinal inflammation, inhibit enteric pathogens, and detoxify putrefactive materials — usually within a few hours.

CREMOMYCIN combines the bacteriostatic agents succinylsulfathiazole and neomycin, with the ad sorbent and protective demulcents, kaolin and pec tin, for comprehensive control of diarrhea.

INDICATIONS: Diarrhea.

CONTRAINDICATIONS: Do not use in intestinal obstruction, ex tensive ulceration of bowel, or diverticulosis; in hypersensitivity to sulfonamides or neomycin; in pregnancy at term, in premature infants, or during first week of life in the newborn.

WARNINGS: Use only after critical appraisal in patients with hepatic or renal damage, urinary obstruction, or blood dyscra sias. Fatal hypersensitivity reactions and blood dyscrasias re ported with use of sulfonamides. Consider periodic blood counts hepatic and renal function tests during intermittent or chronic use.

PRECAUTIONS: Succinylsulfathiazole: Use with caution if there is history of significant allergies and/or asthma. Continued use requires supplementary vitamins B_1 and K. *Neomycin:* Watch fo

your ℞ for Cremomycin can provide relief



ırare-like neuromuscular block during anesthesia if neomycin used preoperatively in large doses when renal function is ɔor; watch for overgrowth of nonsusceptible organisms. Con-der possibility of ototoxicity and nephrotoxicity with prolonged gh dosage.

DE EFFECTS: As with all sulfonamides: Headache, malaise, an-exia, G.I. symptoms, hepatitis, pancreatitis, blood dyscrasias, uropathy, drug fever, rash, conjunctival and scleral injection, techiae, purpura, hematuria, and crystalluria have been noted. educed fecal output of thiamine and decreased synthesis of amin K have been reported. *Neomycin:* Nausea, loose stools.

efore prescribing or administering, read package circular with oduct or available on request.

romptly relieves diarrheal distress

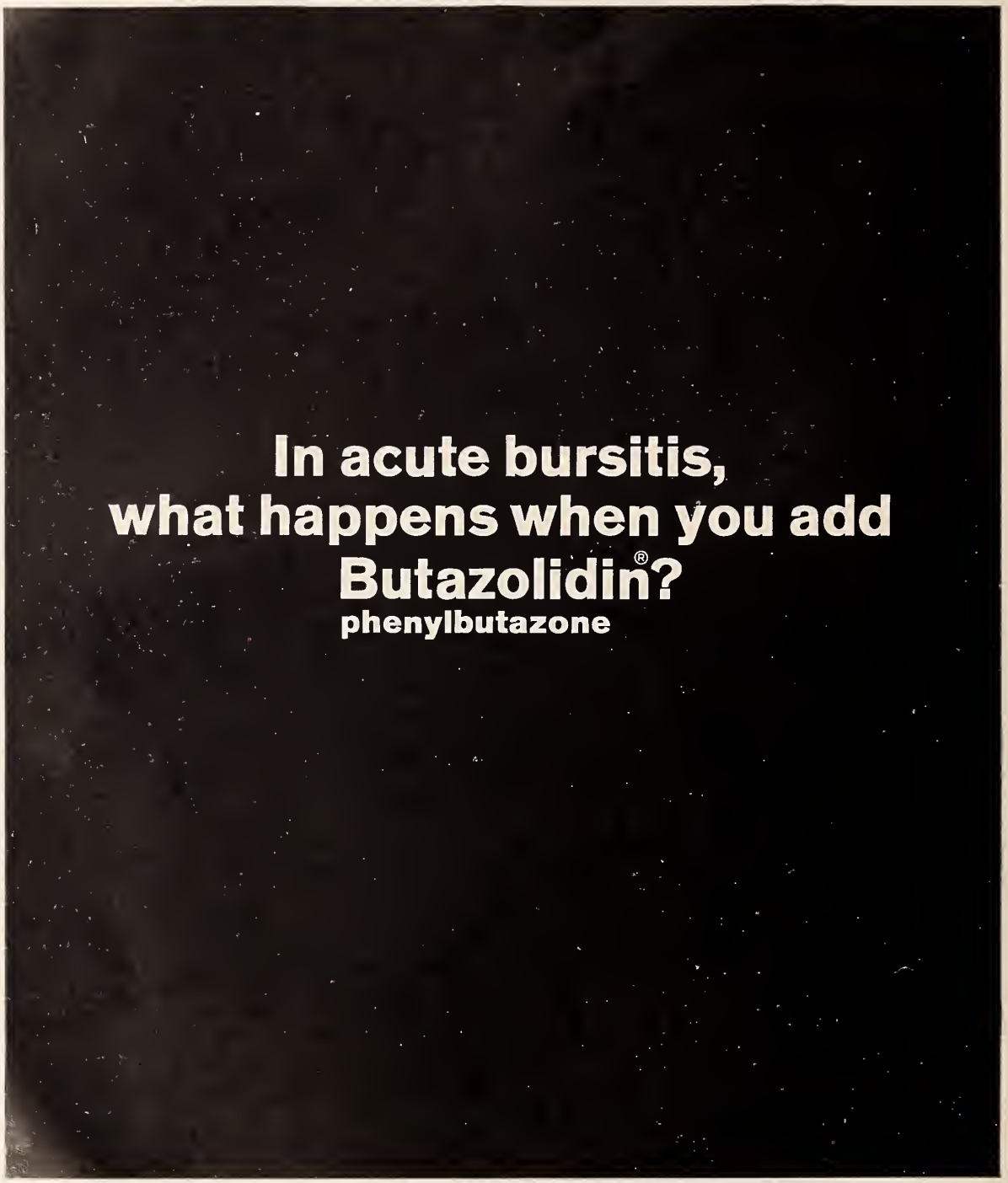
Cremomycin®

NTIDIARRHEAL

mposition: Each 30 cc. contains neomycin sulfate 300 mg. quivalent to 210 mg. of neomycin base), succinylsulfathiazole 0 Gm., colloidal kaolin 3.0 Gm., pectin 0.27 Gm.

MERCK SHARP & DOHME Division of Merck & Co., Inc., West Point, Pa.

here today's theory is tomorrow's therapy

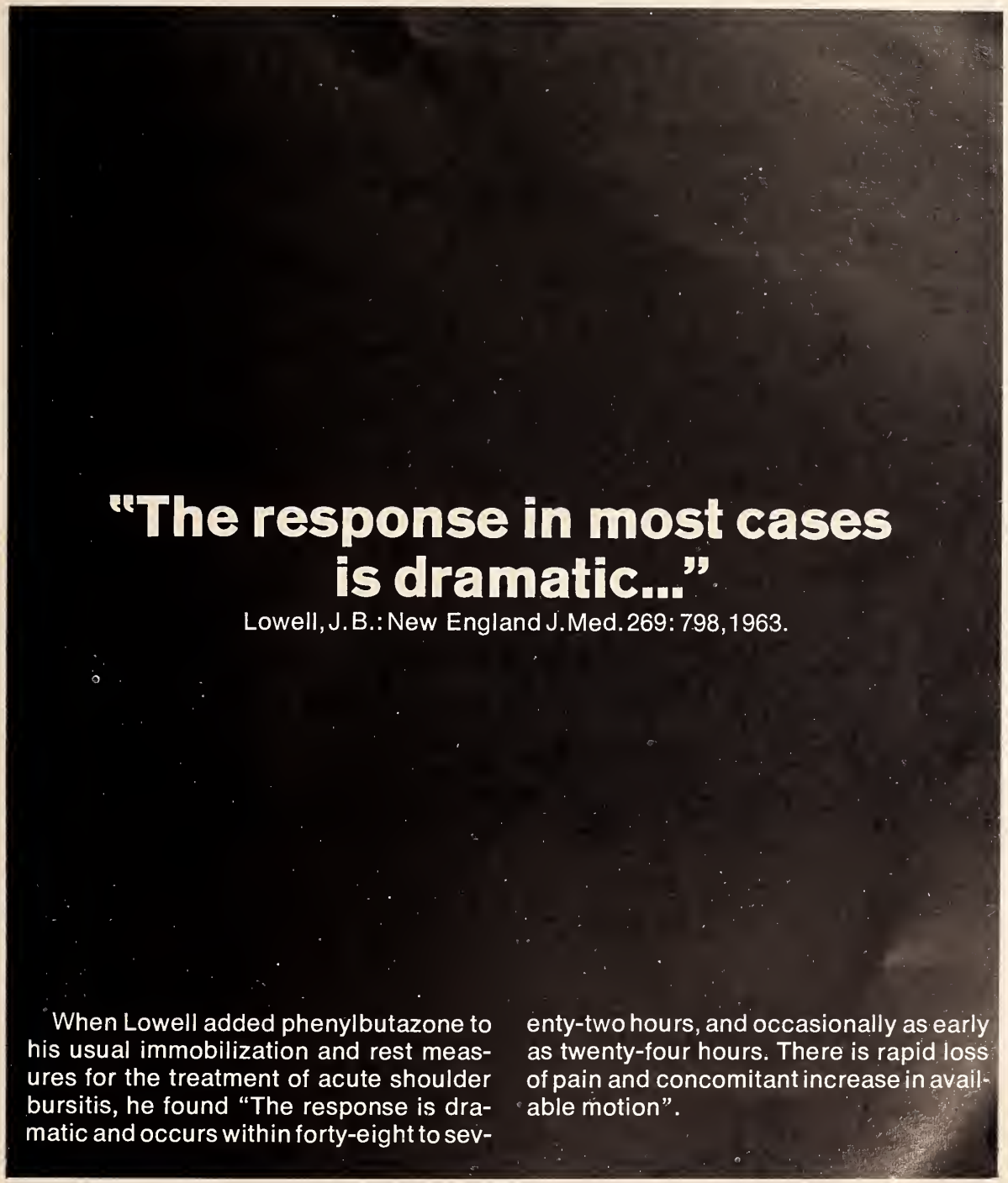


Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. Because of the increased possibility of toxic reactions, the drug should be used with greater care in the elderly and should not be given when the patient is senile or when other potent chemotherapeutic agents are given concurrently. Large doses of Butazolidin alka are contraindicated in patients with glaucoma.

Warning: If coumarin-type anticoagulants are given simultaneously, the physician should watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Patients receiving such concomitant therapy should be carefully observed for this effect. Use with caution in the first trimester of pregnancy.

Precautions: Before prescribing, the physician should obtain a detailed history and perform a complete physical and laboratory examination, including a blood count. The patient should be kept under close supervision and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools. Regular blood counts should be made to guard against blood dyscrasias.

Adverse Reactions: The most common adverse reactions are nausea, edema and drug rash. Moderately lowered red cell count may sometimes occur due to hemodilution. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. Infre-



quently, agranulocytosis, exfoliative dermatitis, Stevens-Johnson syndrome or a generalized allergic reaction may occur and require withdrawal of medication. Stomatitis, salivary gland enlargement, vertigo or languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia are also possible side effects.

Confusional states, hyperglycemia, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hepatitis, jaundice and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently.

Average Dosage: Initially, give 400 mg. daily (one tablet or capsule q.i.d.), reducing this, if possible, when a favorable therapeutic effect has been obtained. If after one week there has been no response, discontinue the drug.

For complete details, please refer to full prescribing information. 6509-V(B)

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York

BU-4513

Butazolidin® alka Geigy

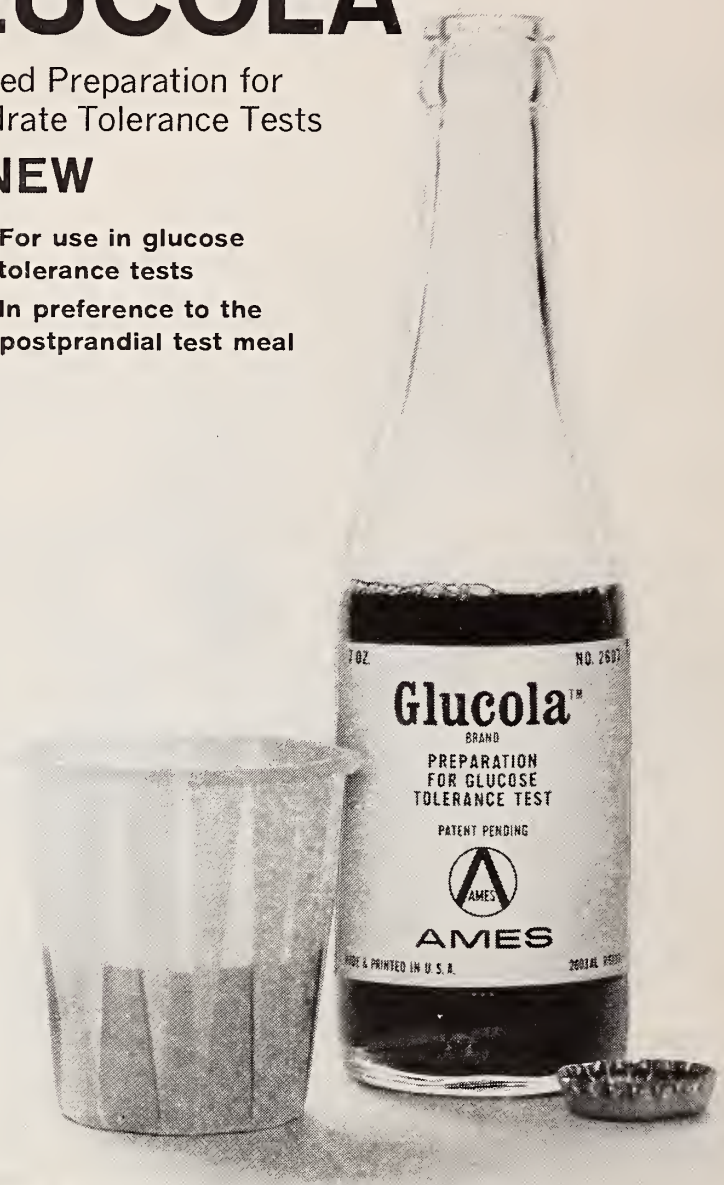
Each capsule contains: Butazolidin®, phenylbutazone, 100 mg.; dried aluminum hydroxide gel, 100 mg.; magnesium trisilicate, 150 mg.; homatropine methylbromide, 1.25 mg.

GLUCOLA™

Carbonated Preparation for
Carbohydrate Tolerance Tests

NEW

- **For use in glucose tolerance tests**
- **In preference to the postprandial test meal**



A NEW SOLUTION FOR AN OLD PROBLEM

Ready to use • Pleasant tasting cola flavor • Well tolerated

A 7-ounce bottle of GLUCOLA provides a liquid oral loading dose equivalent to 75 Gm. of glucose* for carbohydrate tolerance testing. GLUCOLA avoids the nausea that frequently results from lingering sweet laboratory preparations, and the occasional emesis that necessitates rescheduling the test. With GLUCOLA, no time is lost weighing and mixing glucose "cocktails"—only a bottle opener is needed.

753(R2)64

*The rapidly hydrolyzable saccharides in this formulation assure optimum absorption and glucose levels comparable to those obtained with a 100 Gm. loading dose.

Available through your regular supplier:
cartons of 12 7-oz bottles (6 bottles per pack, 2 packs per carton).

Ames Company, Inc.
Elkhart, Indiana

AMES



this part for diarrhea

Kaolin exerts a demulcent action along the gastrointestinal tract and a detoxifying action in the intestines to diminish irritation of the mucosa and lessen hyperperistalsis, nausea and diarrhea.

Pectin exerts its demulcent effect in the entire tract and its detoxifying action primarily in the large bowel to diminish irritation of the mucosa and help restore normal intestinal flora and function.

this part for its discomforts

Belladonna alkaloids as in Donnatal® relieve hypermotility of smooth muscle in the gastrointestinal tract to help control cramping, nausea, and painful straining. Many clinicians consider the belladonna components of Donnagel® to be medicine's most effective depressants of intestinal motility.[1,2] A preparation containing only kaolin and pectin, on the other hand, has "little or no effect on cramps simply because it does not include an agent with antispasmodic action."[3]

Donnagel® treats the whole diarrhea problem.

Available in new 4-ounce plastic bottle on your prescription or recommendation. Also available: Donnagel®-PG (with paregoric equivalent) and Donnagel® with Neomycin. See product literature before prescribing.

References: 1. Kramer, P., and Ingelfinger, F.J.: Med. Clin. N. Amer., *32*:1227, 1948. 2. Hock, C.W.: Clin. Med., *8*:1932, 1961. 3. Winfield, I.W.: Am. J. Gastroent., *31*:438, 1959.

A-H-ROBINS

A. H. Robins Company, Inc.
Richmond, Virginia 23220



"CLEAR THE TRACT" WIT

Coughing ahead...
Clear the Respiratory Tract with Robitussin.

Much more than just a slogan, "clear the tract" reflects the dependable antitussive-expectorant action of the three Robitussin formulations. All contain glyceryl guaiacolate, the time-tested expectorant that greatly enhances the output of lower respiratory tract fluid. Increased RTF volume exerts a demulcent effect on the tracheobronchial mucosa, promotes ciliary action, and makes thick, inspissated mucus less viscid and easier to raise. Glyceryl guaiacolate is safe, non-narcotic, and almost universally accepted by patients of all ages.

NOW! THREE ROBITUSSIN FORMULATIONS	ROBITUSSIN	ROBITUSSIN A-C	ROBITUSSIN-DM
EXPECTORANT	●	●	●
DEMULCENT	●	●	●
COUGH SUPPRESSANT		●	●
ANTIHISTAMINE		●	
LONG-ACTING (6-8 hours)			●

FORMULAS

ROBITUSSIN®
in each 5 cc. teaspoonful:

Glyceryl guaiacolate	100 mg.

(Alcohol 3.5%)

ROBITUSSIN® A-C
(exempt narcotic)
in each 5 cc. teaspoonful:

Glyceryl guaiacolate	100 mg.
Pheniramine maleate	7.5 mg.
Codeine phosphate	10.0 mg.

(warning: may be habit forming)
(Alcohol 3.5%)

ROBITUSSIN®-DM
new, non-narcotic
in each 5 cc. teaspoonful:

Glyceryl guaiacolate	100 mg.
Dextromethorphan hydrobromide	15 mg.

Robitussin and Robitussin-DM are available at pharmacies everywhere on your prescription or recommendation.

A. H. Robins Company, Inc. Richmond, Va.

OUR PHOTO:
Engine No. 89 of the Monadnock, Steamtown & Northern Railway pulls a trainload of steam enthusiasts through the New England countryside between Bellows Falls and Chester, Vermont.

A·H·ROBINS

ONE OF THE ROBITUSSIN® FORMULAS

STOP anxiety

but not your patient

For your anxious patients who must remain active, 'Stelazine' offers a specific, incisive antianxiety effect that can calm excessive anxiety without producing annoying dulling effects. On 'Stelazine' patients react more normally to stresses and at the same time remain alert enough to carry on their normal activities.

Stelazine®

brand of **trifluoperazine**

Before prescribing, the physician should be familiar with the complete prescribing information in SK&F literature or *PDR*. The following is a brief precautionary statement. *Contraindications:* Comatose or greatly depressed states due to C.N.S. depressants and in cases of existing blood dyscrasias, bone marrow depression and liver damage. *Precautions:* Use with caution in angina patients and in patients with impaired cardiovascular systems. Antiemetic effect may mask symptoms of other disorders. An additive depressant effect is possible when used with other C.N.S. depressants. Prolonged administration of high doses may result in accumulative effects with severe C.N.S. or vasomotor symptoms. Use in pregnant patients only when necessary for the patient's welfare. *Side Effects:* Occasional cases of mild drowsiness, dizziness, mild skin reactions, dry mouth, insomnia and amenorrhea. Neuromuscular (extrapyramidal) reactions (motor restlessness, dystonias, pseudo-parkinsonism) may occur and, in rare instances, may persist. In addition, muscular weakness, anorexia, rash, lactation, hypotension, and blurred vision have been observed. Blood dyscrasias and cholestatic jaundice have been extremely rare. For a comprehensive presentation of 'Stelazine' prescribing information and side effects reported with phenothiazine derivatives, please refer to SK&F literature or *PDR*.

Smith Kline & French Laboratories, Philadelphia


Charcoal
Tip
A
Tareyton
20 FILTER
CIGARETTES
Tareyton
Tareyton...with the taste worth fighting for
America's largest-selling charcoal-tip cigarette
©The American Tobacco Company

How long will it take her to recover from her hip fracture if she just doesn't care?



Does she really care?
s she alert, encouraged,
ositive and optimistic
bout getting completely
ell soon?
Or has she given in to
he demoralizing impact
f confinement, disability
nd dependency?
When functional fatigue
omplicates convalescence,
lertonic can help...

Pleasant-tasting Alertonic is pipradrol hydrochloride—an effective cerebral stimulant whose gentle analeptic action helps counteract the apathy and inertia that can often delay convalescence—together with an excellent vitamin and mineral formula, in a satisfying 15% alcohol vehicle.

Nothing fosters confidence and a sense of well-being better than your own personal warmth, understanding and encouragement together with Alertonic to help insure prompt response.

Adequate dosage is important: Prescribe Alertonic—one tablespoonful t.i.d., 30 minutes before meals...tastes best chilled.

And for your patient's sake, prescribe Alertonic in the convenient, economical one-pint bottle.

Alertonic®

Available Only On Prescription

Each 45 cc. (3 tablespoonfuls) contains: alcohol, 15%; pipradrol hydrochloride, 2 mg.; thiamine hydrochloride (vitamin B_1) (10 MDR*), 10 mg.; riboflavin (vitamin B_2) (4 MDR), 5 mg.; pyridoxine hydrochloride (vitamin B_6), 1 mg.; niacinamide (5 MDR), 50 mg.; choline,† 100 mg.; inositol,† 100 mg.; calcium glycerophosphate, 100 mg. (supplies 2% MDR for calcium and for phosphorus) and 1 mg. each of the following: cobalt (as chloride), manganese (as sulfate), magnesium (as acetate), zinc (as acetate), and molybdenum (as ammonium molybdate).

*Multiple of adult Minimum Daily Requirement supplied.
†The need for these substances in human nutrition has not been established.

Indications: 1. Functional fatigue such as that often associated with: a depressing life experience or stressful time of life; advancing years; convalescence; limited activity or confinement. 2. Poor appetite and vitamin-mineral deficiency as they occur in: patients having faulty eating habits; geriatric patients who are losing interest in food; patients convalescing from debilitating illness or surgery.

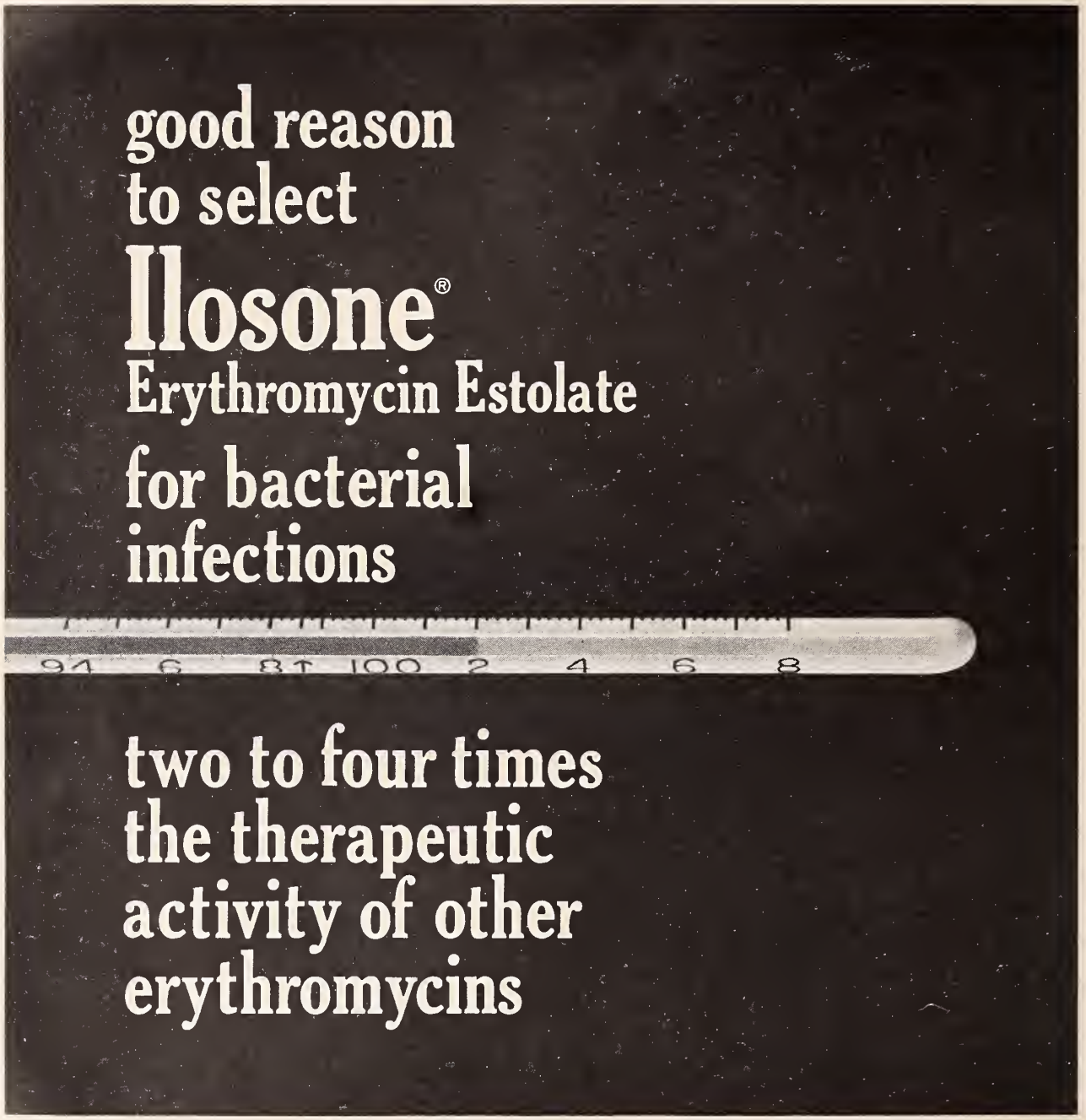
Dosage: Adults, 1 tablespoonful; children (over 15 years old), 1 to 2 teaspoonfuls; children (4 to 15 years old), 1 teaspoonful. To be taken three times daily 30 minutes before meals.

Contraindications: As with other drugs with CNS stimulating action, Alertonic is contraindicated in hyperactive, agitated or severely anxious patients and in chorea or obsessive compulsive states.

Side effects: Reports of overstimulation have been rare. Patients who are known to be unduly sensitive to the effects of stimulant drugs should be observed carefully in the initial stages of treatment.

Merrell

THE WM. S. MERRELL COMPANY
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215



CONTRAINDICATIONS: Ilosone is contraindicated in patients with a known history of sensitivity to this drug and in those with preexisting liver disease or dysfunction.

SIDE-EFFECTS: Even though Ilosone is the most active oral form of erythromycin, the incidence of side-effects is low. Infrequent cases of drug idiosyncrasy, manifested by a form of intrahepatic cholestatic jaundice, have been reported. There have been no known fatal or definite residual effects. Gastro-intestinal disturbances not associated with hepatic effects are observed in a small proportion of patients as a result of a local stimulating action of Ilosone on the alimentary tract. Although allergic manifestations are uncommon with the use of erythromycin, there have been occasional reports of urticaria, skin eruptions, and, on rare occasions, anaphylaxis.

DOSAGE: *Children under 25 pounds*—5 mg. per pound of body weight every six hours. *Children 25 to 50 pounds*—125 mg. every six hours. *Adults and children over 50 pounds*—250 mg. every six hours. For severe infections, these dosages may be doubled.

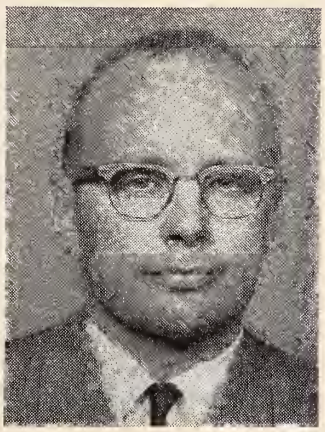
Available in Pulvules®, suspension, drops, and chewable tablets. Ilosone Chewable tablets should be chewed or crushed and swallowed with water.

Additional information available to physicians upon request.
Eli Lilly and Company, Indianapolis, Indiana 46206.

Lilly

600541

Megaloblastic Anemia of Pregnacy



William L. Bunting, M.D.

Although megaloblastic anemia in pregnancy is relatively rare in the United States, it should be considered in any anemic pregnant patient whose peripheral blood smear is not compatable with iron deficiency. The consequences of unrecognized megaloblastic anemia in pregnancy can be serious and occasionally fatal.

ALTHOUGH relatively common in Great Britain megaloblastic anemia of pregnancy is rarely reported from the United States. When seen in this country it is generally among those of poorer economic means. It is seen only occasionally later than the third postpartum week and is felt by many to remit spontaneously after delivery.

A patient is reported below who defied the above generalizations. Because megaloblastic anemia of pregnancy has received relatively little attention in this country the literature pertaining to this subject is reviewed. A potentially fatal outcome makes his type of anemia an important diagnostic consideration.

Phoenix, Arizona.

CASE REPORT

This 21-year-old white female was first found to be anemic in May of 1963, at which time she was three-and-a-half months pregnant. The degree of anemia is unknown, but in July her hemoglobin and hematocrit were reported to be 10.2 grams and 30 per cent respectively. She was given Mol-Iron and on November 13, 1963 was delivered of a six-pound male infant in good condition. Estimated blood loss was 200 milliliters and postpartum bleeding was not excessive. Her hemoglobin on November 15, however, was 8.9 grams and hematocrit 25 per cent. She was

discharged on November 16 on oral iron therapy.

She was re-hospitalized on November 25 because of progressive weakness and a "pelvic infection." Her hemoglobin was 5.0 grams and hematocrit 15 per cent. Her red cells were described as normochromic and normocytic. She was treated with two units of whole blood and Tetracycline, and discharged asymptomatic on November 30 on Mol-Iron tablets. Her hemoglobin at this time was 8.0 grams and hematocrit 24 per cent. On December 6 her hemoglobin was 6.5 grams and hematocrit 21 per cent. On December 16 her hemoglobin was 6.9 grams.

She was seen at another hospital on December 19, 1963, at which time her hematocrit was 19.5 per cent. She was treated with Ferrous Sulfate, 10 grains daily, 15 mcgs. Vitamin B_{12} parenterally, multi-vitamins (which did not contain folic acid), and Tetracycline for a chronic cystitis and vaginitis.

On December 24 she returned with complaints of fatigue and postural lightheadedness. Her hematocrit was 15 per cent. The Ferrous Sulfate was increased to 40 grains daily.

She was first seen by the author on December 31, 1963, seven weeks postpartum. Two days previously she had noted a red blur in the left eye, and the vision in her right eye was becoming red. She noted marked lightheadedness on arising and had been short of breath since delivery. This had grown steadily worse.

Her diet had been normal in all respects during most of her pregnancy and had contained adequate amounts of meat, fresh fruit and green vegetables. However, she had eaten very little the last three weeks of gestation due to nausea Since delivery she stated that she had not eaten properly because she just didn't feel well, and this had been accompanied by a twenty-five-pound weight loss. She did not nurse her baby.

On physical examination she weighed 118 pounds and was 63¼ inches tall. Her pulse was 100 and her blood pressure and temperature were normal. She was very pale and could hardly sit because of lightheadedness, but did not appear malnourished. Her tongue was normal. Many large hemorrhages were seen in both fundi. The region of the left macula was obliterated by a hemorrhage. A systolic murmur was heard over the base and apex of the heart. The deep tendon reflexes were normal as were vibratory and position sense. The remainder of her physical examination was within normal limits.

Her hematocrit was 14 per cent. A white blood count was 5,500 with 34 per cent lymphocytes, 57 per cent neutrophils, 2 per cent metamyelocytes, 1 per cent myelocytes, 2 per cent progranulocytes and 4 per cent eosinophils. A platelet count was 88,000. Examination of a peripheral blood smear showed anisopoikilocytosis, regenerative macrocytosis, increased polychromasia and basophilic stippling. Myeloid immaturity to a rare blast cell was noted. Several hypersegmented neutrophils with stranding were seen, (Figure 1).

Smears made from a bone marrow aspiration, (Figure 2) showed a markedly hypercellular marrow with predominance of immature megaloblasts. Some of these were bizarre and multinucleated forms were seen. Many mitotic figures were present. Myelopoiesis was reduced and slightly left shifted. Megakaryocytes were present but reduced.

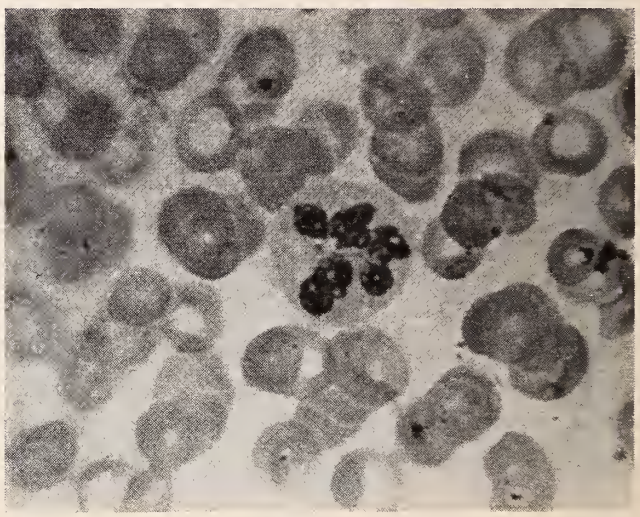


Figure 1. Peripheral blood (X 1,000)

Megaloblastic anemia of pregnancy seemed unlikely considering the severity of her illness seven weeks after delivery. There were so many bizarre megaloblastic and megaloblastoid forms that it was felt she most likely had erythroleukemia. She was hospitalized and given 1,500 milliliters of whole blood over the next four days. She was also started on 80 mg. of Prednisone daily, 100 mg. of Vitamin B_{12} daily intramuscularly and 15 mg. of folic acid daily by mouth. Platelet counts were 56,000 and 81,000. Following the transfusions her hemoglobin was 11.0 grams and hematocrit 33 per cent. Her white cell and differential counts were normal. One

normoblast and several hypersegmented neutrophils were seen on a blood smear. The reticulocyte count on admission was 0.8 per cent and 4.9 per cent four days after folic acid and Vitamin B_{12} were started. A diagnex blue test was positive for gastric acid secretion. The serum bilirubin was 0.3 mgs. per cent direct, and 1.2 mgs. per cent indirect.

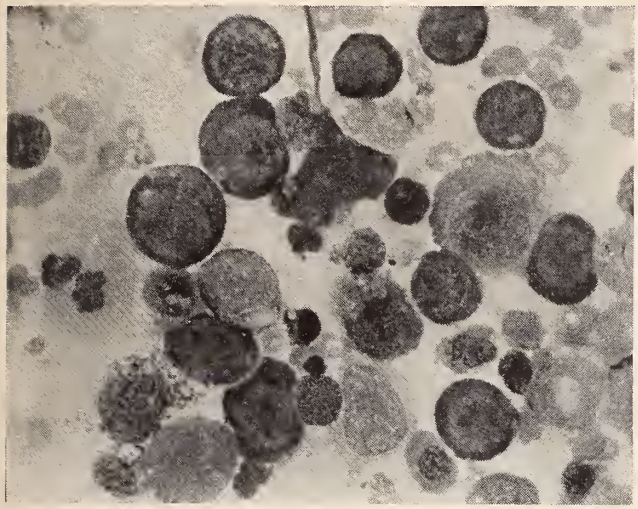


Figure 2.
Bone Marrow prior to therapy. (X 400).

Her hospital course was uneventful and she rapidly became asymptomatic with blood replacement. She was dismissed on January 6, 1964, six days after admission.

She was seen again on January 8, at which time she felt well. Her examination was normal except for resolving hemorrhages in the fundi. She had noted improved vision. White cell and differential counts were normal. Her hematocrit has risen to 38 per cent. A blood smear showed an occasional hypersegmented neutrophil, but otherwise was normal. With this marked improvement, it was apparent that she had megaloblastic anemia of pregnancy, and the Prednisone was rapidly reduced and discontinued. Fifteen mgs. of folic acid daily was continued and no further Vitamin B_{12} was given.

On January 15, another bone marrow aspiration, (Figure 3) was done and this was normal in all respects. A Schilling's test showed 16.8 per cent excretion. The following tests were also within normal limits: Serum carotene, xylose tolerance, quantitative stool fat, and radiologic examination of the esophagus, stomach and small bowel. A tube gastric analysis with histamine stimulation was normal.

Folic acid was stopped on February 3, 1964 after one month of 15 mgs. per day. Aside from a transient leukocytosis her blood tests have been normal since that time. Her hematocrit one year after delivery was 38.5 per cent. Except for an episode of retrobulbar neuritis, responding to Prednisone therapy, she has remained clinically well.

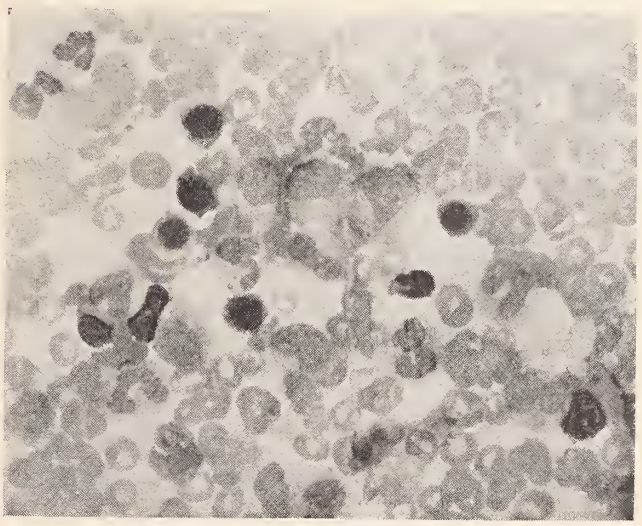


Figure 3.
Bone Marrow 15 days after initiation of therapy. (X 400).

DISCUSSION

Although seldom reported in the United States,[1, 2, 3] megaloblastic anemia of pregnancy is a common disease in Great Britain. The incidence has varied greatly depending on diligence of the search.[4, 5, 6, 7] The highest incidence reported is one in 26.6 deliveries.[8] In 1965, at St. Joseph's Hospital in Phoenix, Arizona, there were 3,481 deliveries, but no reported instances of megaloblastic anemia. However, since no special study was made of this problem, some mild megaloblastic anemias may have undergone spontaneous remission after delivery and been undetected.

Pregnant patients with megaloblastic anemia have been found to be older than the average obstetric patient.[4, 5, 7, 9, 8] Thompson and Ungley[27] reported an average age of 31 years in a group of 45 patients. There has usually been an increased incidence with increasing parity.[4, 5, 6, 7, 10] Most authors have also noted an increased number of multiple births among patients with megaloblastic anemia.[11, 7, 8] Although usually referred to as megaloblastic anemia of pregnancy, it has been found as often, frequently more often, in the puerperium.[12, 13, 5, 6, 7, 9, 10] The patient reported here, however, was unusual in that she continued to have severe megaloblastic anemia seven

weeks after delivery. Badenoch, et al,[14] report two patients seen six weeks postpartum; Giles, et al,[7] in their study of 90 patients report only one patient seen six weeks after delivery, and Forshaw[5] reports one patient seen seven months after confinement.

Once megaloblastic anemia of pregnancy has occurred, the risk in future pregnancies seems to be increased. Callender[12] reports two proven recurrences in 25 cases, and Ainley[4] reported that eight of 116 patients with the disease, also had megaloblastic anemia during previous or subsequent pregnancies. The patients seen in this country have generally been of a poorer economic level.

The retinal hemorrhages seen in the patient reported here were quite striking and severe enough to interfere with her vision. This complication is frequent in any severe anemia and Thompson and Ungley[10] found retinal hemorrhages to be present in 13 of their 37 patients with megaloblastic anemia of pregnancy.

Peripheral blood findings in megaloblastic anemia of pregnancy have differed from pernicious anemia in that macrocytosis has often been reported to be absent,[12, 15, 9, 8, 16, 10] as it was in this patient. Ainley[4] reported macrocytosis in 90 of his 116 cases, while Forshaw[5] felt that a predominance of macrocytes was usual. Scott[16] found a group of patients who had a normocytic or microcytic anemia, but developed macrocytosis after iron was given, suggesting that failure in some to develop macrocytosis is due to iron deficiency. The majority who have studied this problem agree that a marrow aspiration is usually required for diagnosis,[4, 15, 9, 8, 17] but in some cases examination of the peripheral blood smear or buffy coat for megaloblasts has sufficed.[18] Classical megaloblasts may not be essential to the diagnosis. Lowenstein et al[9] reported classical megaloblasts in only half of his patients with red cell counts under 3,500,000 and none of the four patients with counts above this figure. They reported intermediate megaloblasts in all cases. Dawson[19] has apparently gone a step further and made the diagnosis in some patients with normoblastic marrows but with giant metamyelocytes and a number of Howell-Jolly bodies. Hibbard[20] describes a group of patients with normoblastic marrows but excessive FIGLU excretion who had both a hematologic response and conversion to normal FIGLU excretion when treated with folic acid. It is his opinion that excessive FIGLU excretion anticipated abnormal erythropoiesis. Others[21] have found FIGLU excretion to be within normal limits when the marrow was frankly megaloblastic. Megaloblastic changes were found to be absent in 200 normal pregnant or puerperal women.[13]

The incidence of achlorhydria in pregnant women with megaloblastic anemia is usually low,[14] but in some studies has been higher than would be expected in this age group.[7] The patient presented here had free acid production, as judged both by the diagnex blue and aspiration methods. As would be expected in this disease, absorption of Vitamin B_{12} has been normal,[14] as it was in this patient.

Almost all patients with megaloblastic anemia of pregnancy have had satisfactory response to folic acid therapy.[4, 14, 22, 5, 7, 23, 10] Other patients have responded to unrefined liver and yeast,[10] and it is probable that this is due to the folic acid present in these materials. Refined liver extract has not been successful.[10] Response to Vitamin B_{12} has been more erratic but in general unsatisfactory.[14, 7, 9, 10] Where response has occurred with Vitamin B_{12} therapy, the dose has usually been much larger than that used in the treatment of pernicious anemia.

Reticulocyte responses following folic acid therapy have usually been maximal on the fourth to fifth day and in the range of 10 to 20 per cent. The patient reported here had a reticulocyte count of 4.9 per cent four days after Vitamin B_{12} and folic acid were started. She had received 1,000 milliliters of blood prior to this and it is probable that this delayed and suppressed the reticulocyte count.[7]

The dose of folic acid necessary to produce a response is much smaller than ordinarily used. Herbert[24] states that 0.1 mg. of folic acid daily, either orally or parenterally, will produce an excellent hematologic response. It would have been preferable in the present case to have used such a physiologic dose following a unit of packed red cells to relieve the serious symptoms of anemia. The subsequent response would have eliminated the diagnostic consideration of erythroleukemia and indicated the correct diagnosis. Herbert[24] discusses the rationale and steps of such a "therapeutic trial."

It is worth noting that transfusion therapy without folic acid has not helped these patients.[10] The patient herein reported, received

two units of blood two weeks following delivery. Although her hematocrit rose from 15 to 24 per cent, 17 days later it had fallen to 21 per cent and continued to fall thereafter.

Despite the large amount of investigation done on this problem in Great Britain, the etiology of megaloblastic anemia of pregnancy has not been settled. Most investigators feel that there are multiple etiologies.[14, 7, 9, 10] A poor diet with lack of adequate protein and folic acid seems to be the cause in some patients.[14, 5, 6, 7, 25, 15] Herbert[25] has pointed out that tissue stores of folate become depleted in one month's time, whereas Vitamin B_{12} stores may not be depleted for several years. However, this anemia has developed frequently when the diet was full and adequate,[4, 5, 6, 7, 15] and Girdwood[23] points out that many patients with a poor diet, vomiting or diarrhea throughout pregnancy, do not develop anemia. The patient reported here, although intelligent and of ample economic means, was unable to eat properly, due to nausea and vomiting during her last three weeks of gestation and on into the puerperium, the period when megaloblastic anemia is most likely to develop. It is tempting to speculate that her gastrointestinal symptoms caused her anemia by interfering with the intake of folic acid.

Another theory proposed has been folic acid deficiency in the mother due to increased fetal demand. Chanarin, et al,[11] found folic acid clearance to be increased in normal pregnancy, even more rapid in twin pregnancies, but strikingly increased in pregnant patients with megaloblastic anemia.

Malabsorption has been considered the etiology in some patients. Chanarin, et al,[11] also studied absorption of folic acid in megaloblastic anemia of pregnancy and found it to be significantly decreased. In two patients rechecked three months after delivery, folic acid absorption had returned to normal. Giles and Shuttleworth[7] reported four patients who showed evidence of decreased fat absorption. Davidson[26] reported a patient with megaloblastic anemia of pregnancy responding to liver therapy. She was readmitted 25 months later with a recurrent megaloblastic anemia due to idiopathic steatorrhea, which responded to folic acid. The patient reported in this paper showed no evidence of malabsorption in any of the test performed. Girdwood[23] studied folic acid absorption in 18 patients with megaloblastic anemia of pregnancy and found it to be adequate in all. All 18 responded to folic acid. He felt, as have others,[4, 7, 23] that there may be some interference with folic acid metabolism. Whatever the etiology, diet, increased fetal demand, malabsorption or decreased utilization, it is obvious that it is closely related to folic acid. It has been suggested that the low incidence in the United States is due to an increased consumption of folic acid.[27] In support of this, Lowenstein et al[9] in Montreal, found 18 patients with megaloblastic anemia of pregnancy from 1949 through 1952. Following dietary education and polyvitamin supplements containing B_{12} and folic acid, no cases were seen from 1953 through 1955. Dawson, et al,[28] were able to prevent most megaloblastic anemias of pregnancy by giving small doses of folic acid routinely.

Several authors have commented on the tendency of megaloblastic anemia of pregnancy to remit spontaneously following delivery.[14, 11, 9, 29] However, as illustrated by the patient reported in this article, not all women with megaloblastic anemia of pregnancy remit spontaneously. It can be argued that this patient's failure to respond after delivery was due to anorexia resulting in decreased folic acid intake, but in other patients anorexia, nausea and vomiting have often started after the anemia has been well established.[7, 10] Forshaw found that rather than remitting some of their cases deteriorated rapidly in the puerperium. Shapiro et al[30] found this disease frequently in the puerperium in Bantus and suggested that prolonged lactation may precipitate megaloblastic anemia. The patient reported here did not breast feed her baby.

It has been estimated that prior to folic acid therapy a 50 to 75 per cent mortality existed in women with this disease.[29] The patient presented here was in serious condition when first seen. It is, therefore, advisable to consider megaloblastic anemia in any pregnant woman in whom the peripheral blood findings are not characteristic of iron deficiency. This is especially true in the last trimester or puerperium. The routine use of pharmacologic doses of folic acid is condemned by most hematologists because of the possibility of precipitating spinal cord disease in the rare patient in this age group with pernicious anemia. This risk is not present, however, with the use of the physiologic doses during a therapeutic trial as suggested by Herbert.[24]

SUMMARY

A patient with megaloblastic anemia of pregnancy is presented and the literature reviewed. This disease is less frequent in the United States than in Great Britain. It occurs more often in older patients, in multiparae and in multiple pregnancies. The majority of cases appear in late pregnancy or early peurperium. Peripheral blood findings as seen in pernicious anemia are sometimes absent, and a bone marrow examination is often required to make the diagnosis. Dietary deficiencies, malabsorption, increased fetal utilization and interference with the metabolism of folic acid have been proposed as etiologies. With very rare exceptions, all patients respond to oral folic acid therapy. Following delivery, spontaneous remissions sometimes occur, but exceptions are common and some patients become worse. Because of the potentially serious nature of this disease without folic acid therapy, megaloblastic anemia should be considered in all pregnant women whose peripheral smear is not compatible with iron deficiency.

ACKNOWLEDGEMENTS

I wish to express my appreciation to Doctor Donald Campbell of the Mayo Clinic for his advice in the preparation of this paper.

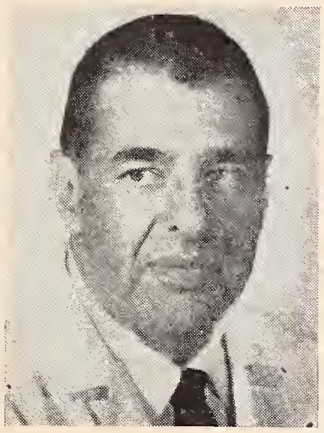
BIBLIOGRAPHY

1. C.P.C. Mass. Gen. Hosp.: Macrocytic Anemia of Pregnancy; **Amer. Practit.**, 12:520, 1961.
2. Moore, C. V., Bierbaum, O. S., Welch, A. D., Wright, L. P.: The Activity of Synthetic Lactobacillus Casei Factor ("Folic Acid") as an Antipernicious Anemia Substance, **J. Lab. and Clin. Med.**, 30:1056, 1945.
3. Vilter, R. W., Harrigan, D., Mueller, J. F., Jarrold, T., Vilter, C. F., Hawkins, V., Seaman, A.: Studies on the Relationships of Vitamin B12, Folic Acid, Thymine, Uracil, and Methyl Group Donors in Persons with P.A. and Related Megaloblastic Anemias; **Blood**, 5:695, 1950.
4. Ainley, N. J.: Megaloblastic Anemia of Pregnancy and the Puerperium; **J. Ob. Gyn., Brit. Empire**, 68:254, 1961.
5. Forshaw, J. W. B.: Megaloblastic Anemia of Pregnancy and the Puerperium; **Post. Grad. Med. J.**, 34:222, 1958.
6. Gatenby, P. B. B.: The Anemias of Pregnancy in Dublin; **Proc. Nutr. Scoc.**, 15:115, 1956.
7. Giles, C., Shuttleworth, E. M.: Megaloblastic Anemia of Pregnancy and Peurperium; **Lancet**, 2:1341, 1958.
8. MacKenzie, A., Abbott, J.: Megaloblastic Erythropoiesis in Pregnancy; **Brit. Med. J.**, 5206:1114, 1960.
9. Lowenstein, L., Pick, C., Philpott, N.; Megaloblastic Anemia of Pregnancy and the Puerperium; **Am. J. Ob. & Gyn.**, 70: 1309, 1955.
10. Thompson, R. B., Ungley, C. C.: Megaloblastic Anemia in Pregnancy and the Puerperium; **Quart. J. Med.**, 20:187, 1951.
11. Chanarin, J., MacGibbon, B. M., Sullivan, W. J., Mollin, D. L.: Folic Acid Deficiency in Pregnancy; **Lancet** 2, Pg. 634, 1959.
12. Callender, S. T. E.: A Critical Review of Pernicious Anemia of Pregnancy; **Quart J. Med.**, 13:75, 1944.
13. Chanarin, I., Rothman, D., Watson-Williams, E. J.: Normal Formiminoglutamic Acid Excretion in Megaloblastic Anemia in Pregnancy; **Lancet**, 1:1068, 1963.
14. Badenoch, J., Callender, S. T., Evans, J. R., Turnbull, A. L., and Witts, L. J.: Megaloblastic Anemia of Pregnancy and Peurperium; **Brit. Med. J.**, 1:1245, 1955.
15. Israels, M. C., G., DaCunha, F. A. L.: Megaloblastic Anemia of Pregnancy; **Lancet**, 2:214, 1952.
16. Scott, Jean, M.: Therapy in Megaloblastic Anemias of Pregnancy: **J. Ob. & Gyn., British Empire**, 64:646, 1954.
17. Wolff, J. R., Limarzi, L. R.: Anemia of Pregnancy — A Correlation of the Peripheral Blood and Bone Marrow Findings; **J.A.M.A.**, 128:482, 1945.
18. Rannie L., McTaggart, H.: Minimal Criteria for the Diagnosis of Megaloblastic Anemia of Pregnancy; **J. Clin. Path.** (British), 14:536, 1961.
19. Dawson, D. W.: Bone Marrow Picture of Folic Acid Deficiency in Pregnancy; **J. Ob. & Gyn., British Empire**, 69:38, 1962.
20. Hibbard, Bryan: Role of Folic Acid in Pregnancy, **J. Ob. Gyn., British Commonwealth**, 71:529, 1964.
21. Lowenstein, L., Bronlage, C. A.: Bone Marrow in Pregnancy and the Puerperium; **Blood**, 12:261, 1957.
22. Brill, G. C.: Megaloblastic Anemia of Pregnancy; Rept. 4 Cases; **Practitioner**, 183:340, 1961.
23. Girdwood, R. H.: The Megaloblastic Anemias; **Quart J. Med.**, 25:87, 1956.
24. Herbert, V.: Megaloblastic Anemias — Mechanisms & Management, **Disease-A-Month**, August, 1965.
25. Herbert, Victor: Current Concepts in Therapy; Megaloblastic Anemia; **N.E.J.M.**, 268-201, 1963.
26. Davidson, L. S. P.: Refractory Megaloblastic Anemia; **Blood**, 3:107, 1948.
27. Heller, Paul, Venger, Norman: Problems in the Differentiation of the Megaloblastic Anemias; **Med. Clinics N. America**, 1st Ed. 46:121, 1962.
28. Dawson, D. W., More, J. R. S., Aird, D. C.: Prevention of Megaloblastic Anemia in Pregnancy by Folic Acid; **Lancet**, 2:1015, 1962.
29. Wintrobe, M. M.: **Clinical Hematology**: 5th Ed., Pg. 513, Publisher: Lee and Febiger, 1961.
30. Shapiro, J., Alberts, H. W., Welch, P. & Metz, J.: Folate and Vitamin B12 Deficiency Associated with Lactation; **Brit. J. Haemat.**, II: 498, 1965.

FDA — Now Hear This!

We do not ask for the repeal of (drug) supervision and control. Rather we ask that the supervision and control be persistent. It seems incongruent that on the one hand, a man may purchase a suicide weapon for 35c over the counter of a drug store, while on the other hand producers of ethical pharmaceuticals must remove their products from the market because of an alleged infraction of the safety rules. Consistency and graciousness are needed here — I trust it will be forthcoming from the FDA. — George J. Lytton, MD, in *Greater Kansas City Medical Bulletin*, (61:59), July 23, 1966.

Cardiovascular Problems in Adolescence



Leonard M. Linde, M.D.

This presentation emphasizes the unique medical and emotional factors present during the adolescent growth period. Careful consideration of social, sexual, athletic and economic factors is mandatory in the total treatment of the teen-ager displaying cardiac disease. An optimum schedule, for the performance of necessary cardiac surgery in these young people, is included.

ALTHOUGH sound medical principles will be successful in dealing with the usual clinical problems seen in adolescence, optimal medical care is often not available to this age group. The fault is not entirely that of the physician but in many instances is related to problems peculiar to adolescence. These are not limited to the frequently discussed emotional and developmental problems but include organic and physiologic variations. Because the adolescent exists in a relative medical "no man's land," few individuals have done good clinical research in problems affecting this age group. This report deals with the cardiovascular, anatomic, physiologic and medical variations of adolescent medicine.

Some of the problems in the adolescent period are related to difficulties in transition between childhood and adult life. The adolescent is quite concerned about his future sexual, social and economic role. The child with a heart condition is particularly concerned about his ability to have children; he is concerned as to whether these children will be normal from a cardiovascular point of view; he is worried about his physical ability to compete in a courting situation, and the more thoughtful adolescent is concerned about his future job opportunities and his ability to provide long-term financial support for his future family.

The male adolescent with heart disease is

Associate Professor of Pediatrics (Cardiology) and Physiology, UCLA
Presented at the Ninth Annual Cardiac Symposium Arizona Heart Association, January 28, 1966

especially concerned about his athletic ability as a means of keeping up with his peers and as a symbolic test of his manhood. It is the job of the physician to determine how much activity is permissible for the cardiac individual. In making this decision, the doctor must balance potential psychological problems against medical risks. In talking with patients in whom some limitation of activity will always be necessary, the physician can at this point stress the benefits of advanced education in obtaining suitable future employment.

The "herd" instinct is particularly strong in adolescence. His intense dislike of being physically different may cause him to play down or minimize real symptoms or abnormalities. However, the physician should not be fooled by the patient's minimization of his problems since these same patients often have very deep underlying anxiety about their health. It is these patients that will be most grateful if the physician devotes the extra time necessary to ferret out any underlying difficulties. On the other hand, the strong "herd" instinct, and anxiety about being physically different may cause the over-anxious patient to over-emphasize certain symptoms. It is important to remember that symptoms in adolescence are not always directly correlated with pathology.

Actual differences in disease pathogenesis exist in this period. Rheumatic fever begins to occur less frequently but when it does present, shows a more classical picture and is associated with a higher incidence of chorea, and a higher frequency of chronic progressive heart disease which may even lead to death. Steroid therapy in the adolescent patient may exaggerate preeixisting hormonal imbalance and produce undesirable side-effects. In congenital heart disease, pulmonary hypertension may develop or begin to rapidly progress around adolescence. The reasons for this are unknown. Increased growth and exercise demands may result in the appearance of signs and symptoms or, occasionally, may result in the first appearance or detection of a murmur at this time.

Changes in physical findings in an adolescent with pre-existing and known heart disease may occur. Increased intensity or audibility of a heart murmur is not necessarily a poor prognostic sign. It may be related to the hyperdynamic hypermetabolic state of the adolescent associated with increased cardiac output. A murmur may be more audible at this time because of increased patient cooperation. Occasionally an organic murmur is louder in the adolescent menstruating female who develops mild anemia. On the other hand, decreased intensity or audibility of a heart murmur is not necessarily a good prognostic sign. It may be related merely to increased chest thickness or decreasing cardiac output due to increased cardiac disease. In patients with a left to right shunt, progression of pulmonary hypertension, an ominous event, may be the underlying cause of the decreasing murmur and even a false clinical "improvement."

In general, corrective cardiac operations should be performed at or before adolescence. After adolescence, specific social problems including acceptance by peers, and the added burdens of marriage, pregnancy and children put an increased weight on the patient and physician. Progressive systemic vascular change may make operation difficult and the post-operative course longer and more difficult after adolescence. Actually, many of the reasons for early operation before adolescence become even more pressing at this age. The increased growth and exercise demands of adolescence and the danger of progressive pulmonary hypertension argue for earlier operation. In addition, the danger of fixation of psychosomatic factors and the creation of cardiac "crippling" warrant early operation.

Left to right shunts:

In dealing with specific lesions, most children today will have operation long before adolescence. Patent ductus arteriosus may require repair in infancy but in any event should be repaired before school age. Since the operative risk is probably lower than the risk of observation, operation should be performed as soon as the surgeon feels the child is large enough for the procedure to be performed safely.

Most ventricular septal defects can be repaired before school age. It is particularly important to close larger defects with pulmonary hypertension since pulmonary vascular disease may progress rapidly during adolescence in some patients. However, an occasional patient with a small ventricular septal defect will not show progressive cardiomegaly until faced with the increased demands of adolescence so that operation may have to be done at this time.

On the other hand, the appearance of cyanosis in the adolescent with a ventricular septal defect with pulmonary hypertension usually means that he has become inoperable and may imply that operation has been delayed too long.

Uncomplicated atrial septal defects have an extremely low operative risk and almost no incidence of pulmonary hypertension before the adolescent period. Occasionally, because of the difficulty in mitral valve repair, operation in patients with endocardial cushion defects is postponed until adolescence. Then, if the mitral valve must be replaced with an artificial valve, a large enough valve can be employed so that re-operation will not be necessary.

Right to left shunts:

Most operable patients with cyanotic congenital heart disease who reach adolescence will be those with tetralogy of Fallot. Most of these will have had a previous Blalock anastomosis which maintained them in satisfactory condition until this time. It is our belief that definitive heart pump surgical repair should not be delayed beyond adolescence in most cases. Even though the operative risk may be high, definitive repair allows the patient to plan his life without the thought of future cardiac operation or shortened life span.

Defects without shunting:

Hemodynamics in most patients with pulmonary valvular stenosis do not change markedly with growth. The patient with moderately severe or severe pulmonary valvular stenosis will usually require operation before the adolescent period. Only an occasional individual, previously considered mild or moderate, develops symptoms with the increased physiologic demands of adolescence. These rare patients may need pulmonary valvulotomy.

Aortic valvular stenosis also is a disease of many gradations. In the second decade of life sudden death begins to occur in patients with this disease so that operative repair must be carefully considered. Recent percutaneous techniques for retrograde arterial catheterization make it possible to frequently evaluate left ventricular and aortic hemodynamics under basal conditions and with exercise. This helps to make decisions regarding operation in this disease.

Previous recommendations for repair of coarctation of the aorta suggested that the immediate pre-adolescent era is optimal but this disease, too, is repaired in most centers long before adolescence. Indeed, the adolescent period is characterized by increasing aortic damage and increasing difficulty in repair.

Recently, replacement of defective aortic and mitral valves has been accomplished in children of all age groups, but particularly in adolescence. In this age period, increasing biologic demands often result in sudden increases of heart size. Since these individuals have often approached their full growth, adult-sized valves can be placed and reported results have been excellent.

All patients with heart disease need careful longitudinal medical supervision but this is particularly true during the rapid growth periods in childhood and adolescence. Clinical evaluation and laboratory testing (electrocardiogram and roentgenogram) must be done at suitable intervals. Appropriate antibiotic therapy should be administered before dental work, surgical procedures and for bacterial infections to reduce bacteremia and the risk of bacterial endocarditis in patients with organic heart lesions. For most congenital cardiac lesions, exercise restriction is not necessary, since the patient's physiologic controls usually result in wise self-imposed limitations. With certain lesions, however, imposed limitation is necessary. Left ventricular overwork, (and therefore vigorous athletics) should be minimized with aortic stenosis, aortic or mitral insufficiency and in even mild decompensation. In the presence of severe hypertension (as in coarctation of the aorta) further elevation of blood pressure should be prevented by reducing physical activity.

A final problem in adolescence is hypertension. Careful attention must be paid to selecting a sufficiently large cuff, proper positioning of the patient and his extremity and allowing a sufficient rest period before measurements are made. The adolescent period is characterized by vasomotor instability so that in one series, 10% of adolescents had high blood pressure but only 1.5% had diastolic hypertension. It is interesting that only this 1.5% showed a very strong familial hypertensive history. It is likely that these patients represent a significant number of our future hypertensives. However, whether the tendency of the other 8.5% of systolic hypertensive adolescents to show a systemic vasoconstrictive response to stress will lead to future hypertension has never been definitely determined. In adolescents with persistent hypertension, careful work-up is necessary to rule out correctable renal, endocrine, neurogenic, and cardio-vascular abnormalities before essential hypertension is diagnosed or therapy is begun.

Summary

Cardiovascular problems of the adolescent have been discussed in light of some of the general medical problems of this age period. The adolescent's concern about his future sexual, social, athletic and economic role has been emphasized. Some features of cardiovascular disease in this age period including increased pulmonary and systemic vascular reactivity have been illustrated. Finally, certain recommendations for the cardiac care of the adolescent have been outlined.

MD To Become Butcher, Finds Income Too Low

Medical Tribune—World Wide Report

OLDHAM, ENGLAND — Dr. Walter Ashworth of the Royal Infirmary here is giving up his job as resident medical officer to become a butcher in his father's firm because "medicine is a luxury I can no longer afford."

Dr. Ashworth, who is 32, is planning to marry, and he says "it would be impossible to support a wife on the money I earn now."

As resident medical officer he is paid about 1,100 pounds ($3,080) a year. "By the time everything has been taken out — tax, superannuation stamps, and hospital board — I am left with about 11 pounds per week," he said.

As an apprentice-partner in his father's chain of butcher shops, he will earn about 2,000 pounds ($5,600) a year.

"When I have got things worked out, I hope to find a part-time medical post," he told MEDICAL TRIBUNE. "I would feel very guilty if I abandoned medicine altogether."

Lung Cancer - Diagnosis and Treatment, 1966



Richard K. Hughes, M.D.

Of all deaths from cancer, lung cancer is the most common; causing one of seven. Cigarette smoking apparently plays a role in its cause. Surgical ablation of cancer of the lung remains the best weapon and radiation may be palliative but chemotherapy appears to have little beneficial effect on the disease. The over-all cure rate reported here is small, but encompasses all cases including terminal and grossly inoperable patients. In selected series where resection is carried out the cure rate rises to 25-30%.

Chief of Thoracic and Cardiovascular Surgery, Wadsworth Hospital, Veterans Administration Center, Los Angeles, and Assistant Professor of Surgery, University of California, Los Angeles, School of Medicine.

THE conquest of lung cancer is one of the greatest current challenges of our profession. It is the leading cause of death from all cancer, and cancer is second to cardiovascular disease as the most frequent cause of death in our nation. In California, lung cancer causes more than twice as many deaths in males as the next most lethal cancer, cancer of the prostate. In 1960 there were 3,239 deaths from lung cancer in California. It has been estimated that if present trends continue, more than 100,000 California children in school during 1960 will die of lung cancer before reaching the age of 70.[2] Interruption of this devastation is the problem set before us. Our attempts thus far have been unimpressive. We are curing only one out of twenty patients with lung cancer. This sad state has not changed significantly during the last two decades. One big reason for this is that only 15 per cent of

patients with lung cancer have localized disease at the time of diagnosis.[3] Pulmonary resection is the only method we have of curing lung cancer. Its success rests upon the premise that localized lung cancer has been removed. It is obvious that the results of surgery are limited by the malignant nature of this tumor. Attempts at earlier diagnosis and treatment of lung cancer have also been discouraging. Tumor personality or biologic predetermination appears to be more important than temporal behavior. It is not likely that more and more energy devoted to earlier diagnosis and treatment will significantly change the grim statistics we are faced with.[4] Reduction of cigarette smoking may be the most effective way to combat lung cancer. Our warnings to date have been associated with an increased consumption of cigarettes. Reduction of air pollution may also be of value. Our progress here has been discouraging. Another problem of prevention is that there may be a myriad of unknown causes for the rising rate of lung cancer.

As physicians we are most responsible to the patient who comes to our door for help. At our present state of knowledge we can only offer the best there is of current diagnostic techniques and treatment, though these fall far short of our desires.

DIAGNOSIS

Symptoms

Symptoms of lung cancer frequently occur during a late stage of the disease. The relatively well known symptoms of lung cancer are: cough, hemotypsis, wheeze, dyspnea, fever, chest pain, weight loss, malaise, weakness, anorexia, and hoarseness. Cough is the most common symptom of carcinoma of the lung. Since most patients with lung cancer are heavy smokers they often have experienced a chronic cough for many years. A change in the character, time, and frequency of cough is of significance. Hemoptysis resulting from cancer is due to ulceration of tumor in the airway. It is usually most severe when caused by a malignant lung abscess. Most instances of hemoptysis are not caused by lung cancer. It may be an early symptom of lung cancer, however, and often brings the patient to his doctor. Wheezing is a symptom which smokers are also accustomed to, but the astute patient may seek medical help because of its onset, change, or increase. It is often due to partial bronchial obstruction by tumor. Increased dyspnea is frequently a late symptom of lung cancer. It is usually due to significant bronchial obstruction, tracheal obstruction, or a large malignant pleural effusion. Dyspnea may also be associated with pulmonary infection which is caused by carcinoma, causing fever, toxicity, and other signs of pneumonia. Chest pain may also accompany this inflammation or, more ominously, be related to extension of tumor to the parieties of the chest wall. Significant weight loss, if not associated with sepsis, is often found in advanced lung cancer and is an ominous prognostic symptom. Malaise, weakness, and anorexia which are not accompanied by sepsis are also symptoms which frequently are found with extensive lung cancer. Hoarseness accompanied by carcinoma of the lung and due to recurrent laryngeal nerve palsy is a symptom of lung cancer which has progressed beyond the stage of curability.

Symptoms of metastatic bronchogenic carcinoma are frequently the first ones noted by the patient. Brain metastases are often heralded by a new, relatively persistent headache. A patient with suspected lung cancer who has recently developed head pain, usually has, in our experience, a brain metastasis. Back pain of recent onset is also a grave symptom; in association with lung cancer it is most often due to metastases or extension to the ribs or spine. Although these are frequently not visible in initial roentgenograms, films taken at a later date will often reveal a lytic lesion. Pain due to other skeletal metastases is also frequent. Discovery of a lump in the supraclavicular area due to a metastasis to the prescalene lymph nodes may occasionally be the first abnormality noted. Persistent abdominal pain of recent onset and in association with lung cancer must always be suspected of as being due to abdominal spread. Metastases to the liver are quite common and may be painful. During the last few years we have performed a small exploratory celiotomy for otherwise operable patients with lung cancer and unexplained abdominal pain. Half of these patients have been found to have abdominal metastases and have therefore been spared an unnecessary thoracotomy.

One of the most poorly appreciated symptoms of lung cancer is shoulder and arm pain due to cancer in the thoracic inlet. This symptom is frequently initially interpreted as being caused by degenerative disease of the cervical discs or

cervical arthritis. Many of these patients have received prolonged physiotherapy and some have had multiple myelograms, cervical laminectomy, or exploration of the bracheal plexus prior to diagnosis of carcinoma. Horner's syndrome has often been present during these procedures. Regrettably, early diagnosis of bronchogenic carcinoma in the thoracic inlet is infrequently made.[8] Symptoms of superior vena caval obstruction, such as facial edema in the morning, hoarseness, stridor, and prominence of cervical and chest wall veins are usually manifestations of lung cancer which has progressed beyond the stage of curability.

There has been a recent appreciation of the numerous extrapulmonary manifestations of cancer of the lung. Most of these are not caused solely by lung cancer, but may be caused by a primary malignant tumor in other organs. They may be the initial symptoms of lung cancer and may actually be present long before any abnormality is visible in the thoracic roentgenogram. Clubbing and hypertrophic pulmonary osteoarthropathy are well known peripheral manifestations of cancer of the lung. Lung cancer is accompanied by clubbing in 5 to 10 percent of patients.[10] Osteitis of the shafts of long bones and synovitis of the peripheral large joints cause pain and swelling. These symptoms are often misinterpreted as being due to rheumatoid arthritis; cancer of the lung should be suspected.

Neuromuscular abnormalities are thought to be associated with approximately 75 per cent of lung cancers.[10] These syndromes are frequently mixed and overlapped and are less frequently seen in pure forms. The first one is cortical cerebellar degeneration. It is related to degeneration and loss of Purkinge cells in the cerebellar cortex without brain metastasis and is manifested by ataxia, nystagmus, dysarthria, intention tremor, and vertigo. Dementia often results. Spinal fluid may contain increased numbers of lymphocytes and high protein levels. The second neuromuscular abnormality is peripheral neuropathy due to degeneration of neurons in the posterior root ganglions. It is manifested by numbness, paresthesias, loss of sensory modalities, sensory ataxia, and loss of deep tendon reflexes. Impaired cerebration is another of these peripheral manifestations and may vary from diminished mentation to severe dementia. Muscle weakness is the final neuromuscular abnormality. It is due to degeneration of muscle fibers or to motor neuron deficits. It is usually limited to the muscles of the limb girdles and trunk. It may mimic myasthenia gravis or progress to a stage which is difficult to differenetiate from dermatomyositis.

Metabolic abnormalities are another and more rare group of extrapulmonary manifestations of lung cancer. Adrenal cortical hyperplasia is frequently found to accompany cancer of the lung. Adrenal cortical hypersecretion may result in a picture which is indistinguishable from Cushing's syndrome. Another metabolic abnormality is hypercalcemia which is not due to skeletal metastases. Serum phosphorus is decreased while alkaline phosphatase is usually normal. Its manifestations are polyuria, polydipsia, weakness, anorexia, lassitude, somnolence, and constipation. A metabolic abnormality which in our experience is not so rare is the inappropriate antidiuretic hormone response. The patient with this abnormality frequently has a low salt syndrome due to abnormal loss of sodium and chloride in the urine. We have found this abnormality most prominent in the immediate postoperative period. The final metabolic abnormality is manifested by gynecomastia. Increased quantities of circulating estrogens have been found without hepatic metastases.

The last group of extrapulmonary manifestations are the vascular abnormalities. Inflammation and thrombosis of veins are found in 2 to 3 per cent of patients with cancer of the lung.[10] Cough, hemoptysis, chest pain, and an abnormal opacity in the thoracic roentgenogram in a patient with phlebitis may be misinterpreted as being due to a pulmonary infarction, when in fact, a lung cancer is present. Nonbacterial thrombotic endocarditis is a more rare vascular abnormality. Sterile verrucous lesions may form on the cardiac valves and may cause peripheral arterial emboli. It has been said that cerebral vascular accidents in the presence of cancer of the lung may be caused more frequently by this endocarditis than by cerebral metastases.[10] In our experience many of these patients with extrapulmonary manifestations of lung cancer are rather poor surgical risks. This is particularly true in the group with neuromuscular abnormalities.

Many patients have cancer of the lung for prolonged periods without any symptoms. Diagnosis may be suspected on the basis of an abnormal roentgenogram. Fortunately, there has been less tendency in recent years to observe

asymptomatic pulmonary opacities progress from a stage of potential curability to one of incurability.

Physical Findings

During the early phase of lung cancer physical findings are usually absent. Physical diagnosis of the chest is of questionable value in lung cancer when compared to interpretation of thoracic roentgenograms. Abnormal masses of the skin, supraclavicular region, chest wall, and abdomen accompanied by lung cancer are usually metastases. Evidence of Horner's syndrome or early superior vena caval obstruction may be missed if not looked for. The findings of extrapulmonary manifestations have been discussed above.

Roentgenographic Examinations

The most valuable study in the detection of lung cancer is the performance of thoracic roentgenograms. Any abnormal pulmonary opacity must be suspected of being a lung cancer, particularly in patients who are beyond 40 years of age.[6, 7, 9] The only abnormal opacity which is consistently benign is one which is densely calcified or contains calcific laminations. While many lung cancers can be easily detected by thoracic roentgenograms, there continue to be confusing roentgenographic findings which often mislead interpretation. Pneumonia and atetlectasis accompanied by carcinoma may improve spontaneously or more often during administration of systemic antibiotics. This partial resolution has frequently led to a delayed diagnosis of lung cancer. Localized pulmonary emphysema is a subtle radiographic finding which may be easily overlooked or misinterpreted while a malignant tumor is partially obstructing a portion of the lower airway. This finding may progress rarely to a localized lung cyst or spontaneous pneumothorax. Lung abscess is commonly associated with carcinoma of the lung and in nearly half of patients over 50 years of age is caused by carcinoma. Prolonged treatment for a chronic malignant abscess is a serious error. One of the most difficult areas of interpretation is the mildly enlarged pulmonary hilum. Occasionally a pulmonary angiogram will demonstrate a large pulmonary artery which is the explanation for this. Benign enlarged lymph nodes and remnants of past inflammatory disease may also cause an enlarged hilum. Previously taken films should be compared in order to determine change in the suspicious area. If these are not available, roentgenograms which are taken every few weeks will generally show gradual increase in size if carcinoma is the underlying cause. Exploratory thoracotomy is frequently the only way to settle the issue. Another source of difficulty is lung cancer in the thoracic inlet ("Pancoast tumor"). The findings of this lesion may be very subtle; only a small "apical eyebrow or cap" may be present. This is frequently misinterpreted as being due to pleural thickening.[8] Careful comparison of the pulmonary apices, the performance of thoracic roentgenograms taken in the lordotic position, use of the Bucky grid, and laminagrams, in association with a high index of suspicion for these "Pancoast tumors" will frequently lead to proper interpretation. Another area of confusion occurs in the patient with known inflammatory pulmonary disease, such as tuberculosis. The appearance of a new opacity is often considered to be due to a continuation of the inflammatory process when, in fact, a carcinoma is present. Lung cancer which is hidden within the shadows of the heart, mediastinum, and diaphragm is easily overlooked in posteroanterior thoracic roentgenograms but may be visualized in oblique or lateral views. Lytic rib lesions may be missed unless each rib is purposefully evaluated. In doubtful findings special views of the ribs may demonstrate metastases or extension of tumor. Laminagrams are helpful for the correct interpretation of peripheral nodular lesions. They may contain concentric calcifications or multiple nodules in one or both lungs which are not apparent in regular roentgenograms. High quality laminagrams may also reveal endobronchial lesions. Roentgenograms taken during barium swallow may show incurable extension of tumor to the esophagus. This may be confirmed by esophagoscopy and biopsy.

The usefulness of bronchograms, pulmonary artery angiograms, bronchial arteriograms, pneumomediastinograms, and megavolt films taken with a linear accelerator, have not been clearly defined. These specialized techniques have occasionally been of value, but they have not gained wide acceptance for the diagnosis and evaluation of lung cancer. Azygograms may help define inoperability of the occasional patient with a large right posterior bronchogenic carcinoma. Definite azygous vein obstruction is usually caused by a nonresectable tumor. Radioactive pulmonary lung scan has not been of particular

use in the diagnosis or evaluation of lung cancer. We have found radioactive scanning of the brain, bones, and liver to be helpful in patients suspected of having metastatic tumor in these structures. Abnormal scans are not diagnostic, but they may lead to a histologic examination confirmatory of a suspected peripheral metastasis which would contraindicate an unnecessary thoracotomy.

The appearance of a peripheral solitary pulmonary nodule frequently brings up the question of a primary tumor in some organ other than the lung. We do not believe that performance of an intravenous pyelogram, upper and lower gastrointestinal radiographic study, radiographic bone survey, radioactive scans, proctoscopy, and specialized nose and throat examination, are indicated unless there are specific symptoms or findings which suggest abnormality in these extrathoracic areas. These studies are expensive, time consuming, and are almost never rewarding for investigation of a solitary pulmonary nodule.[13]

Cytology

The diagnosis of primary lung cancer can be established by sputum cytology more often than by all other combined diagnostic methods except thoracotomy. If more than 10 properly prepared sputum specimens are examined by skilled personnel the diagnosis can be established in 77 per cent of patients with lung cancer. If six sputum specimens are examined, diagnosis can be established in nearly 50 per cent and if only one or two sputum specimens are studied the diagnosis is made in 23 per cent.[12] The incidence of diagnosis is higher for oat cell carcinoma, central tumors, and those which cause hemoptysis. Examination of secretions aspirated through a bronchoscope does not yield a higher percentage of diagnosis than coughed specimens.[12] The incidence of falsely positive results is less than one per cent.

Sputum cytology is helpful in distinguishing thoracic lesions whose radiographic appearance is not clearly that of carcinoma. A positive sputum test settles the issue, although negative results do not eliminate the possibility of lung cancer. Cytology is a simple method of diagnosis for the patient with probable advanced carcinoma of the lung, who is obviously inoperable and in need of palliative treatment.

Cytologic diagnosis of pleural fluid appears to be more difficult for the cytologist. Pleural mesothelial cells may be difficult to differentiate from malignant cells. Nevertheless, diagnosis of inoperable carcinoma of the lung is frequently established by this examination. A pleural effusion which is caused by cancer will contain malignant cells in about 50 per cent of patients. Bloody pleural fluid accompanied by a suspicious pulmonary mass often contains malignant cells.

Bronchoscopy

Bronchoscopy and bronchial biopsy is diagnostic of primary cancer of the lung in 25 to 40 per cent of patients with this disease. The percentage of diagnosis is less for metastatic tumors to the lung. It should be part of the investigation of all central pulmonary and mediastinal masses, as well as of unexplained hemoptysis and is also indicated before thoracotomy for central pulmonary or mediastinal lesions for reasons other than diagnosis. Unsuspected incurable extension of tumor to the trachea or carina may be verified by biopsy. Bronchoscopy may show tumor at a level which could only be removed by pneumonectomy, and pulmonary function may be so abnormal that pneumonectomy would not be tolerated. Compression and fixation beneath normal bronchial mucosa may indicate extension of tumor or hilar adenopathy at a level above the endobronchial lesion. Hoarseness due to cord paralysis can be confirmed at endoscopy. Bronchoscopy is not usually indicated for peripheral pulmonary lesions or for clearly inoperable tumors which have been diagnosed by other studies, such as sputum cytology. Bronchoscopy is hazardous for patients with a thoracic aortic aneurysm or superior vena caval obstruction and associated dyspnea. Pressure from the bronchoscope may rupture a thoracic aneurysm and trauma to edematous laryngeal and tracheal mucosa may increase respiratory obstruction which is due to superior vena caval blockade. It is not wise to perform bronchoscopy for patients with metastases to the cervical spine. Bronchoscopy carries a small but real risk and should not be performed for diagnostic purposes until the patient is in good enough condition to withstand the stress of this procedure. Bronchial secretions aspirated through the bronchoscope should be sent for cytologic examination, and if there is a question of inflammatory disease they should also be submitted for bacteriologic study.

Hemoptysis has been mentioned as an indication for bronchoscopic examination. The ques-

tion of whether this should be done as an emergency procedure during the hemoptysis often arises. Proponents of emergency bronchoscopy for hemoptysis believe that it may be possible to determine the lobar or segmental bronchus from which the bleeding is arising. During hemoptysis we have rarely been able to determine exactly the source of bleeding. Blood is frequently present in many orifices or obscures vision so that proper interpretation is difficult. Severe hemoyptsis may be aggravated by the trauma of bronchoscopy and the bronchoscopists vision is often so obscured by blood that diagnosis is unlikely. We believe in the performance of bronchoscopy during hemoptysis, however, we do not rush the patient to the operating room for this procedure and we are not upset by cessation of hemoptysis before diagnostic bronchoscopy is performed.

Bronchoscopic examination is a valuable diagnostic procedure in the evaluation of a possible lung cancer. It is also important to the thoracic surgeon for defining the feasibility and extent of pulmonary resection. It should be performed by the surgeon who is considering doing the pulmonary resection.

Scalene Lymph Node Biopsy

The importance of this procedure is that it may establish the diagnosis of inoperable lung cancer. Lung tumors which have spread to the prescalene lymph nodes are beyond the limits of curative resection. In the presence of lung cancer nonpalpable scalene nodes contain metastatic tumor in about 15 per cent of the specimens, and palpable nodes are nearly always malignant. Scalene node biopsy is not performed for all pulmonary lesions suspected or diagnosed as being carcinoma of the lung. It is not usually indicated for evaluation of solitary pulmonary nodules when nodes are not palpable. It is unnecessary when inoperability has been established by other criteria. Advanced superior vena caval syndrome may cause scalene node biopsy to be hazardous because of a greater risk of operative hemorrhage unless metastatic nodes are easily palpable and can be biopsied with a minimal amount of dissection. Biopsy is indicated for palpable lymph nodes accompanied by a suspicious pulmonary lesion. It is also performed as part of the evaluation of large hilar pulmonary or mediastinal masses. Perhaps the most frequent indication for scalene node biopsy is for the patient who is a poor surgical risk, who has a suspected or diagnosed lung cancer, and who is not inoperable by other criteria. Discovery of scalene nodes which contain metastatic cancer of the lung relieves the surgeon of pronouncing a patient medically inoperable or of performing an unnecessary and risky thoracotomy. Biopsy is also performed when the tumor appears to be unresectable in roentgenograms. It is usually performed on the side of the pulmonary or mediastinal abnormality. Tumors in the left lower lobe frequently cross the midline and metastasize to the right as well as the left prescalene lymph nodes. Obstruction of the mediastinal lymphatics may cause metastases to the opposite scalene nodes from any part of the right or left lung. For this reason some surgeons routinely perform bilateral, in preference to unilateral, scalene node biopsy. This is particularly true for the patient for whom a very high surgical risk for thoracotomy or an unresectable tumor is predicted. Lymph nodes should always be removed at this procedure and it should be the aim of the surgeon to remove anthracotic lymph nodes which drain from the lung. These nodes are found deep in the neck and adjacent to the junction of the internal jugular and subclavian vein. This dissection is surrounded by vital structures and although it is usually performed with local anesthesia, it does have a small but real risk and morbidity.

Cervical Mediastinotomy

Cervical mediastinotomy is usually performed after biopsy of the prescalene nodes has shown no metastatic tumor. The presence of metastatic tumor in paratracheal lymph nodes obtained through a cervical mediastinotomy establishes a state of incurability. The performance of cervical mediastinotomy will approximately double the incidence of positive metastatic lymph nodes obtained by scalene node biopsy alone. Steele and Marable reported 193 cases of lung cancer in which scalene node biopsy and cervical mediastinotomy were performed.[14] Neither biopsy technique was diagnostic in 153 instances. Both were diagnostic in 13. Scalene node biopsy was diagnostic in 9 cases in which mediastinal biopsy was negative. Cervical mediastinal biopsy was diagnostic in 9 instances while scalene node biopsy was negative. Of 40 positive biopsies, from one or more areas, 18 would have been negative if scalene node biopsy alone had been performed. Not all thoracic surgeons are enthusiastic about

cervical mediastinotomy. Serious bleeding, respiratory obstruction from mediastinal hematoma, and recurrent nerve palsy are more frequent than with scalene node biopsy. Local anesthesia is less effective in relieving discomfort during this procedure than during scalene node biopsy. It is performed through a small transverse midline incision directly above the suprasternal notch. Usually only palpably pathologic tissue is removed. This procedure is of value for patients who are inoperable but from whom a tissue diagnosis has not been obtained; for patients in whom resection appears risky or unlikely; and for patients who have a widened superior mediastinum.

Anterior Mediastinotomy

There has been recent interest in the small anterior extrapleural mediastinotomy, which is performed through the bed of a resected costal cartilage under local anesthesia. The major indication for this procedure is a clearly inoperable hilar or mediastinal lesion which has defied diagnosis by routine methods. Since most radiotherapists or chemotherapists require histologic diagnosis prior to institution of therapy, diagnosis by this method may be indicated for the patient who is in need of palliative treatment. Advantages of this procedure over standard thoracotomy are that postoperative morbidity and mortality are probably lower and general anesthesia is not required. The disadvantages appear to be that the incision is small for good exposure, particularly for posterior lesions; there is risk of serious bleeding or pleural penetration and sudden pneumothorax; special instruments and lighting are required; and pulmonary resection can not be performed if an unexpected resectable lesion is found. This procedure has not yet gained wide acceptance.

Other Biopsy Procedures

In the presence of known or strongly suspected cancer of the lung biopsy of any suspicious, palpable mass often reveals metastatic tumor. Such a finding contraindicates exploratory thoracotomy. Lytic rib lesions accompanied by a suspicious lung tumor will usually contain carcinoma. Discovery of a rib metastasis which is separable from the primary tumor and does not represent direct extension is evidence of inoperability. Direct extension of carcinoma of the lung to the ribs can often be resected with the attached tumor. Needle biopsy may yield the diagnosis of clearly inoperable lung tumors which have defied histologic diagnosis and which are directly adjacent to the chest wall. Most surgeons are not enthusiastic about needle biopsy of intrapulmonary lessions which are separated from the chest wall by aerated lung. Introduction of a needle through relatively normal lung tissue before tumor is encountered may be followed by air embolism or pneumothorax. Contamination of the needle tract by malignant cells does not appear to be a very real complication. Diagnostic celiotomy is occasionally a helpful procedure for the patient with lung cancer. We have reserved this procedure for patients with a palpable abdominal mass, obscure abdominal pain, generalized signs and symptoms of carcinomatosis, or high alkaline phosphatase. Metastases from lung cancer are not infrequently found in the liver, celiac lymph nodes, tissue at the esophagogastric junction, falciform ligament, and even to the wall of bowel. Bell has found abdominal metastases in nearly 20 per cent of otherwise operable patients with carcinoma of the lung.[1] The presence of intra-abdominal metastases is an obvious contraindication to exploratory thoracotomy.

Exploratory Thoracotomy

Diagnosis is made in 25 to 50 per cent of patients with lung cancer by exploratory thoracotomy and biopsy. Persistent efforts to establish a preoperative diagnosis by sputum cytology or by other described diagnostic procedures are not always indicated. Solitary pulmonary nodules are usually diagnosed by thoracotomy. Wedge, subsegmental, or segmental excisional biopsy of a localized mass with adequate margin of normal lung tissue is submitted for immediate histologic diagnosis. Lobectomy of pneumonectomy is usually performed if the specimen is malignant. Masses which are deep within a lobe may require lobectomy biopsy for diagnosis. Pneumonectomy is not performed until histologic diagnosis of cancer is established.

TREATMENT

Preoperative Evaluation

Candidates for exploratory thoracotomy and possible pulmonary resection for cancer of the lung are often fragile. Most are 60 years of age or older, heavy smokers, and have emphysema and other degenerative diseases of advanced age. Pulmonary function is of major importance to the surgeon. Simple tests such as walking up two or three flights of stairs or testing ability to blow out a match with pursed lips, are useful.

Quantitative ventilation studies should be performed for patients suspected of having abnormal pulmonary function. We have found the results of timed vital capacity and maximum ventilatory volume most helpful. The results of these tests depend on cooperation and desire of the patient to make a maximal effort. The presence of thoracic pain will limit their usefulness. A maximum ventilatory volume less than 40 or 50 per cent of predicted, indicates that pneumonectomy of a functioning lung may be hazardous and values below 30 per cent indicate that lobectomy may not be tolerated. Blood gas studies are subject to fewer variables and also reveal abnormalities of pulmonary perfusion and diffusion in addition to ventilation. Blood gas studies are often performed at rest and during exercise. A pCO_2 above 45 mm. Hg or a pO_2 below 70 mm. Hg suggests that pulmonary resection may be hazardous.

Right heart catheterization is a helpful technique for evaluation of the patient with borderline pulmonary function. The presence of pulmonary hypertension before or during exercise indicates that major pulmonary resection may be poorly tolerated. We have found left or right main pulmonary artery blockade to be a helpful procedure in the evaluation of preoperative patients with significant decrease in pulmonary function. A balloon-tipped cardiac catheter is inflated in one of the main pulmonary arteries, preferably the side of possible pulmonary resection. A so-called medical pneumonectomy is obtained since perfusion and gas-exchange in the blockaded lung is nearly shut off. Pressures in the main pulmonary artery proximal to the balloon are measured before and during exercise (400 ft. lb. per minute). Blood gas studies are obtained before blockade, during blockade, and during exercise with blockade. Ventilation studies and cardiac output are performed before and during pulmonary artery blockade. Significant abnormalities which develop during pulmonary artery blockade seem to indicate at our early stage of analysis of this rather complex diagnostic procedure that pneumonectomy may be poorly tolerated. It is always difficult for us to pronounce a patient as medically inoperable who has a known carcinoma of the lung. These quantitative studies aid in defining the feasibility of pulmonary resection for some patients. They also may indicate that while pneumonectomy is out of the question for a particular patient, lobectomy or partial lobectomy may be tolerable.

Electrocardiograms are wisely performed for preoperative candidates who are over 40 years of age. Bronchogenic carcinoma is the most common malignant tumor found in the heart. Arrhythmias in the presence of lung cancer are suggestive of cardiac metastases or extension of tumor to the heart. We have performed selective coronary angiograms for a few patients with angina pectoris and questionable electrocardiograms. In our experience patients with definite symptoms and findings of cardiac ischemia or resistant cardiac failure are poor candidates for pulmonary resection.

In the presence of a probable carcinoma of the lung we are very suspicious of neurologic signs and symptoms. If they are present, analysis of spinal fluid, electroencephalograms, and radioactive brain scan are performed. Pneumoencephalograms or cerebral arteriograms are occasionally performed for particularly suspicious neurologic findings. If the results of these tests are equivocal, a month or two of observation will often show progressive deterioration if cerebral metastases are present. Neuromuscular abnormalities which are associated with lung cancer and do not result from metastases to the brain may be very confusing to the clinician because of the difficulty in differentiating them from signs of brain metastases.

Contraindications to Thoracotomy for Curative Resection of Lung Cancer

Since 1933 when Evarts Graham performed the first successful pneumonectomy for cancer of the lung, there has been a gradually increasing number of contraindications to thoracotomy for curative resection. Surgeons have become more selective in submitting patients to thoracotomy as experience and survival statistics have accumulated. The findings listed in Table I are generally considered as contraindications. These findings are present in more than half of all patients with lung cancer at the time of initial diagnosis. Cell type, with the exception of oat cell carcinoma, is not an important factor to the surgeon. Oat cell carcinoma is practically never cured.

TABLE I
CONTRAINDICATIONS TO THORACOTOMY FOR CURATIVE RESECTION OF LUNG CANCER

1. Extrathoracic metastasis.
2. Scalene or paratraceal lymph node metastasis.
3. Recurrent nerve palsy.
4. Contralateral pulmonary extension or metastasis.
5. Malignant cells in pleural or pericardial fluid.
6. Superior vena caval obstruction.
7. Tracheal or carinal extension of tumor.
8. Esophageal or spinal extension of tumor.
9. Cardiac extension or metastasis.
10. Metastasis to or extensive invasion of chest wall.
11. Central oat cell carcinoma.
12. Uncontrolled extrathoracic primary cancer.
13. Azygous vein obstruction.
14. Advanced medical disease.

Curative Pulmonary Resection

At the time of initial diagnosis of 100 patients with primary cancer of the lung about 50 are inoperable on the basis of the above contraindications. Of the 50 patients who are operable about 25 are found at thoracotomy to have nonresectable tumor. Resections are performed for about half of those operated on, or for 25 of the original 100 patients. Of these 25 patients, one-quarter or six patients are cured. These figures have not varied much from one clinic to the next or from one decade to the next. Increasingly radical resections have not increased cure rates, in fact the tendency during the last decade has been to perform the more limited lobectomy in preference to pneumonectomy when all apparent tumor can be removed by the lesser procedure. In the presence of severely decreased pulmonary function or pulmonary metastases from controlled extrathoracic primary tumor we and others have performed an occasional partial lobectomy for lung cancer. Extended resections of involved trachea, carina, vena cava, aorta, and esophagus have not clearly justified their increased operative morbidity and mortality.[11] Studies of adjuvant chemotherapy or preoperative radiation therapy combined with resection have not yet shown increased survival. There may be one exception to this last statement. Combined preoperative radiation and resection of tumors which invade the chest wall, which would include "Pancoast tumors," may increase survival over resection alone.[11] The recent popularity of combined preoperative radiation and resection of other lung cancers appears to be waning because of increased postoperative morbidity, mortality, and lack of improvement in cure rates. It is interesting that resection of unilateral pulmonary metastases from extrathoracic carcinomas and sarcomas, which have been controlled, will cure about the same percentage of patients as those resected for primary cancer of the lung.[15]

PALLIATIVE TREATMENT OF LUNG CANCER

A great effort has been made to cure patients of lung cancer. Quantity of survival has been stressed more than quality of survival. Nineteen of 20 patients with lung cancer must live and die with their tumor. There is a need to increase the quality of survival of these unfortunate and incurable patients.

Palliative Surgery

Surgical treatment can offer relief of distressing symptoms to some patients with incurable lung cancer. Endotracheal or endobronchial resection and cauterization of obstructing tumor in the trachea or major bronchus performed through a bronchoscope is frequently successful in temporarily relieving dyspnea. This is usually performed following failure of radiation therapy. It is often necessary to repeat removal of tumor through the bronchoscope in order to maintain patency of the airway. Tracheostomy may relieve dyspnea which results from obstructing tumor in the trachea. If the end of the tracheostomy tube can be placed below the level of tumor, airway obstruction can be relieved. Occasionally use of a long (cane) tracheostomy tube is necessary to do this.

Large malignant pleural effusions often cause distressing dyspnea. Closed thoracostomy and underwater seal drainage through a chest tube usually evacuates the pleural fluid. Drainage should be maintained for several days before the tube is removed. Effusion will not usually recur following this simple treatment. Occasionally a malignant lung tumor will cause spontaneous pneumothorax. Closed thoracostomy and underwater seal drainage is the preferred treatment. At exploratory thoracotomy a non-resectable cancer may be found with a malignant pleural effusion. Poudrage of the pleural surfaces with talcum powder will prevent future pleural effusions.

Incurable metastases or extension of tumor may be found at exploratory thoracotomy. In some instances it is best to proceed with palliative pulmonary resection when technically feasible. Indications for such a procedure are: recurrent and severe hemoptysis, symptomatic pulmonary sepsis, such as lung abscess, severe uncontrollable cough, and distressing chest pain.

Severe chest pain is usually caused by extension of tumor into the chest wall. Palliative pulmonary resection in this circumstance would include resection of involved chest wall. Results of intercostal nerve section are disappointing. Relentless pain from Pancoast tumors can be relieved by removal of the tumor even though it is not possible to perform a curative resection. Osteoarthropathy may cause marked pain and swelling in the limbs. Palliative resection of the offending tumor will give immediate relief. If resection is not technically possible, unilateral thoracic vagotomy may be equally effective. Occasionally palliative pulmonary resection may be indicated for the above symptoms even though it is known before thoracotomy that cure is not possible. Thoracotomy and pulmonary resection for the known incurable patient has a high postoperative morbidity and mortality. It should not be performed unless symptoms are severe. We avoid palliative pneumonectomy. Palliative surgery for superior vena caval obstruction caused by a malignant tumor is rarely successful and does not justify the risk. We have not had experience with cordotomy or lobotomy for the treatment of severe pain from lung cancer.

Radiation Therapy

Radiation therapy will not cure lung cancer nor will it usually prolong life. Nevertheless, it will often relieve distressing symptoms from lung cancer. Pain which results from extension of tumor or metastases to bone is usually relieved by local radiation therapy. It will frequently relieve the symptoms and findings of superior vena caval obstruction. Airway obstruction, pulmonary atelectasis, and lung abscess which are due to cancer are often helped by radiation therapy. Large unsightly scalene lymph node metastases usually resolve following radiation treatment. We have not found good correlation between cell type and benefit from radiation. A few of the most spectacular resolutions of cancer that we have seen have been "radioresistant" adenocarcinomas. Unfortunately, relief of symptoms following radiation therapy is not usually permanent, but relief obtained is of great importance to a miserable patient. We reserve palliative radiation therapy for the treatment of symptoms. We do not radiate incurable or nonresectable tumors which are asymptomatic. We prefer to wait until symptoms develop. When this occurs we are then in a position to offer treatment which is effective for the relief of symptoms. The major reason for this attitude is that radiation therapy is not curative and does not prolong life. It does have the disagreeable features of morbidity, and expense of the patient's time and money.

Chemotherapy

No drug has been found which can cure lung cancer and no drug has been found which will significantly prolong life of patients suffering from lung cancer.[5] After many years of experience with many anticancer drugs, chemotherapy for the treatment of lung cancer must still be regarded as experimental. The morbidity of chemotherapy is real and the effects are questionable. There is a great need for an effective agent. Continued carefully studied and controlled administration of new drugs must be performed in the hope that an effective agent will be forthcoming. The results of drugs which have been studied to date are discouraging. Delivery of concentrated dosages into the pulmonary or bronchial arteries on the side of the cancer has not been of significant value.

Summary

Lung cancer is the most common cause of death from cancer in this country. It causes one of seven deaths from cancer and twice as many deaths in males as the next most lethal cancer. The results of efforts to stop this midcentury epidemic or to cure the disease have been negligible. Reduction of cigarette smoking may be the best way to interrupt this devastation, although an annual expenditure of over $230,000,000 by tobacco companies to promote smoking

is difficult to counteract. Attempts at ablation of lung cancer by surgery, radiation, and chemotherapy have been discouraging. Methods to accentuate host resistance may be more rewarding. Resectional surgery is the only current therapy which will cure lung cancer. It will cure about one-fourth of patients so treated, but resection is not feasible for most patients with lung cancer. Therefore only 6 out of 100 can be cured. Perhaps one candle is better than darkness.

REFERENCES

1. Bell, John W.: Open abdominal biopsy before thoracotomy for lung cancer, Geriatrics, 20: 715-27, Sept., 1965.
2. Calif. Tumor Registry: Cancer in California, State of California Department of Public Health, 1964, pp 11-65.
3. Calif. Tumor Registry: Cancer Registration and Survival in California, State of California Department of Public Health, 1963, pp 171-89.
4. Gilbertsen, Victor, A.: X-ray examination of the chest: an unsatisfactory method of detection of early lung cancer in asymptomatic individuals, J.A.M.A., 188: 1082-83, June, 1964.
5. Higgins, G. A., and Wolf, J.: Chemotherapy and lung cancer — present status, J. Thorac. Cardiov. Surg., 51: 449-54, March, 1966.
6. Hughes, R. K., and Blades, B.: Stable bronchogenic carcinoma, Postgrad. Med., 28: 616-22, Dec., 1960.
7. Hughes, R. K., and Blades, B.: Multiple primary bronchogenic carcinoma, J. Thorac. Cardiov. Surg., 41: 421-29, April, 1961.
8. Hughes, R. K., and Katz, R. I.: Late Recognition of bronchogenic carcinoma in the thoracic inlet, J.A.M.A., 192: 964-66, June 14, 1965.
9. Hughes, R. K., and Klopp, C. T.: Associated carcinomas of the larynx and lung, Amer. J. Surg., 101: 511-15, 1961.
10. Knowles, J. H., and Smith, L. H.: Extrapulmonary manifestations of bronchogenic carcinoma, New Eng. J. Med., 262: 505-10, March 10, 1960.
11. Paulson, D. L., Shaw, R. R., Kee, J. L., Mallams, J. T., and Collier, R. E.: Combined preoperative irradiation and resection for bronchogenic carcinoma, J. Thorac. Cardiov. Surg., 44: 281-94, Sept., 1962.
12. Russell, W. O., Neidhardt, H. W., Mountain, C. F., Griffith, K. M. and Chang, J. P.: Cytodiagnosis of lung cancer, Acta Cytol., 7: 1-44, Jan.-Feb., 1963.
13. Steele, John D.: The solitary pulmonary nodule: report of a cooperative study of resected asymptomatic solitary pulmonary nodules in males, J. Thorac. Cardiov. Surg., 46: 21-39, July, 1963.
14. Steele, J. D., and Marable, S. A.: Cervical mediastinotomy for biopsy, J. Thorac. Surg., 37: 621-24, May, 1959, and personal communication, Jan., 1964.
15. Thomford, N. R., Woolner, L. B., and Clagett, O. T.: The surgical treatment of metastatic tumors in the lungs, J. Thorac. Cardiov. Surg., 49: 357-63, March, 1965.

24-HOUR AMBULANCE SERVICE



MOTOR AND AIR

A. L. MOORE & SONS

Mortuary and Ambulance Service

Adams at Fourth Ave., Phoenix

AL 2-3411

MUNICIPAL BONDS offer you important advantages

First, the income from Arizona Municipal Bonds is completely tax free and is not even included in an Income Tax return.

Also, Municipal Bonds are quality investments, a position they enjoy as a result of the outstanding record established by municipalities, extending over a long span of years, in promptly meeting their Debt Service Requirements.

Furthermore, where specific maturities are desired, this requirement is easily satisfied.

In addition, geographical diversification is available, an important ingredient of any well conceived investment program.

And finally, the broad interest in municipal bonds from individuals, banks and insurance companies provides an active and ready market.

The complete facilities of the Investment Department and its experienced personnel are available to you. We invite your inquiries.

Send for our Booklet: "TAX-FREE MUNICIPAL BONDS"

VALLEY NATIONAL BANK

INVESTMENT DEPARTMENT

Phoenix:	*Tucson:*
Home Office	Downtown Office
Phone: 261-2900	*Phone:* 624-8711

Specializing in Arizona Municipal Bonds



Preludin®
phenmetrazine
hydrochloride





helps keep calories at arm's length

In one double-blind program* involving diet, close doctor/patient cooperation, exercise, posture instruction, and follow-up visits, 93 obese patients received Preludin or placebo. The drug and placebo were alternated every four weeks. This procedure lasted from 8 to 35 weeks.

Sixty-one percent of the patients lost more weight on Preludin than on placebo. In fact, they lost an average 1.9 pounds per week—almost four times as much as when they were on placebo!

For a decade Preludin has demonstrated similar results. Its effectiveness has been described in more than 300 published clinical reports involving more than 10,000 patients.

Preludin curbs appetite without excessive stimulation. It will work in your weight-control programs too.

*Barnes, R. H.: J.A.M.A. 166:898, 1958.

Preludin® tablets of 25 mg.
Endurets® prolonged-action tablets of 75 mg.
Dosage: One 25 mg. tablet two or three times daily, or one 75 mg. Endurets tablet once daily.
Contraindications: Severe coronary artery disease, hyperthyroidism, severe hypertension, nervous instability, and agitated prepsychotic states. Do not use with other CNS stimulants, including MAO inhibitors.
Warning: Do not use during the first trimester of pregnancy unless potential benefits outweigh possible risks.
Precautions: Use with caution in *moderate* hypertension and cardiac decompensation. Excessive use may result in a psychotic illness manifested by restlessness, mood or behavior changes, hallucinations, or delusions.
Side Effects: Dryness or unpleasant taste in the mouth, urticaria, and (rarely) overstimulation, insomnia, dizziness, nausea, or headache.

For details, see full Prescribing Information. 6544-III (B)

Under license from Boehringer Ingelheim G.m.b.H.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation, Ardsley, N.Y.

Behind continued high blood pressure readings lies the possibility of organic damage[1-13]

MANY OF THE aspects of essential hypertension are unpredictable—either because there are a number of mechanisms involved or because individuals differ in their responses to these mechanisms.[1]

There is one aspect of hypertension, however, that seems, in many cases, predictable. ". . . when the blood pressure is elevated to a marked degree for an adequate period of time, this in itself leads to perpetuation of the syndrome with resulting vascular damage throughout the body."[14] All too often the disease progresses until there is damage to one of three vital organs: the heart, the kidney, the brain.





"Hypertension is certainly a major factor in the genesis of coronary heart disease, and it is even more important when compounded with obesity."[4]

"[Vascular deterioration] can be clearly seen in the kidney with a degree of damage that can be measured by renal function studies."[10]

". . . most evidence suggests that reduction of blood pressure, when it is too high, not only relieves the heart of excess work but reduces vascular damage."[1]

"In short, treatment is indicated."[1]

Antihypertensive therapy will not restore the blood vessels to normal. Yet many of the vascular changes and symptoms caused by increased blood pressure may be arrested or alleviated when the blood pressure is reduced to normotensive levels.[7]

Reducing the blood pressure helps curtail further vascular damage and improves the prognosis — when damage is not too far advanced before therapy is started.[14] Essential hypertension is an indication not only for treatment, but for *early* and adequate treatment of the patient in question.

Reduce the blood pressure with Rautrax-N

Rautrax-N combines the antihypertensive-tranquilizing action of whole root rauwolfia with the antihypertensive-diuretic action of bendroflumethiazide in one convenient medication. The two drugs complement each other so that smaller doses of both are possible.

Rauwolfia combined with bendroflumethiazide is particularly effective in long-term therapy,[15-17] since beneficial effects do not diminish with continuous daily administration.

For most patients 1 or 2 Rautrax-N tablets daily are sufficient for maintenance therapy. The simplicity, convenience and economy of such a dosage schedule are of particular benefit to older patients.

References: 1. Page, I. H., and Dustan, H. P.: The Usefulness of Drugs in the Treatment of Hypertension, in Ingelfinger, F. J.; Relman, A. S., and Finland, M.: Controversy in Internal Medicine, Philadelphia, W. B. Saunders Co., 1966, p. 95. **2.** Hollander, W.: The Evaluation of Antihypertensive Therapy of Essential Hypertension in Ingelfinger, F. J.; Relman, A. S., and Finland, M.: Controversy in Internal Medicine, Philadelphia, W. B. Saunders Co., 1966, p. 97. **3.** Nickerson, M.: Antihypertensive Agents and the Drug Therapy of Hypertension, in Goodman, L. S., and Gilman, A.: The Pharmacological Basis of Therapeutics, ed. 3, New York, The Macmillan Co., 1965, p. 727. **4.** Berkson, D. M.: Indust. Med. & Surg. **32**:371, 1963. **5.** Cohen, B. M.: M. Times **91**:645, 1963. **6.** Lee, R. E., et al.: Am. J. Cardiol. **11**:738, 1963. **7.** Moyer, J. H.: Am. J. Cardiol. **9**:821, 1962. **8.** Moser, M.: New York J. Med. **62**:1177, 1962. **9.** Wood, J. E., and Battey, L. L.: Am. J. Cardiol. **9**:675, 1962. **10.** Moyer, J. H., and Heider, C.: Am. J. Cardiol. **9**:920, 1962. **11.** Moser, M., and Macaulay, A. I.: New York State J. Med. **60**:2679, 1960. **12.** Judson, W. E.: Nebraska M. J. **44**:305, 1959. **13.** Hodge, J. V.; McQueen, E. G., and Smirk, H.: Brit. M. J. **1**:5218, 1961. **14.** Moyer, J. H., and Brest, A. N.: Hypertension Recent Advances, Philadelphia, Lea & Febiger, 1961, p. 633. **15.** Berry, R. L., and Bray, H. P.: J. Am. Geriatrics Soc. **10**:516, 1962. **16.** Reid, W. J.: J. Am. Geriatrics Soc. **13**:365, 1965. **17.** Feldman, L. H.: North Carolina M. J. **23**:248, 1962.

Contraindications: Severe renal impairment or previous hypersensitivity. **Warning:** Ulcerative small bowel lesions have occurred with potassium-containing thiazide preparations or with enteric-coated potassium salts supplementally. Stop medication if abdominal pain, distension, nausea, vomiting or G.I. bleeding occur.

Precautions and Side Effects: The dose of ganglionic blocking agents, veratrum or hydralazine when used concomitantly must be reduced by at least 50% to avoid orthostatic hypotension. Caution is indicated in patients with depression, suicidal tendencies, peptic ulcer; electrolyte disturbances are possible in cirrhotic or digitalized patients. Marked hypotension during surgery is possible; consider discontinuing two weeks prior to elective surgery and observe patients closely during emergency surgery. Rauwolfia preparations may cause reversible extrapyramidal symptoms and emotional depression, diarrhea, weight gain, edema, drowsiness may occur. Bendroflumethiazide may cause increases in serum uric acid, unmask diabetes, increase glycemia and glycosuria in diabetic patients, and may cause hypochloremic alkalosis, hypokalemia; cramps, pruritus, paresthesias, rashes may occur.

Dosage and Supply: Initial dosage, 1 to 4 tablets daily, preferably at mealtime. Maintenance, 1 or 2 tablets daily. Rautrax-N is supplied as capsule-shaped tablets containing 50 mg. Rauwolfia serpentina whole root (Raudixin®), 4 mg. bendroflumethiazide (Naturetin®), 400 mg. potassium chloride.

Also available: Rautrax-N Modified — capsule-shaped tablets containing 50 mg. Rauwolfia serpentina whole root (Raudixin), 2 mg. bendroflumethiazide (Naturetin), 400 mg. potassium chloride. Both potencies available in bottles of 100. For full information, see Product Brief.

RAUTRAX®-N

Squibb Rauwolfia Serpentina Whole Root (50 mg.) with Bendroflumethiazide (4 mg.) and Potassium Chloride (400 mg.)

SQUIBB

'The Priceless Ingredient' of every produ
is the honor and integrity of its maker.

ated in the heart of the beautiful Phoenix citrus area near picturesque Camelback Mountain, this hospital is dedicated exclusively to the treatment of psychiatric and psychosomatic disorders, including alcoholism.

Facilities include:

- ☆ Spacious, year 'round outdoor recreation area
- ☆ Heated swimming pool
- ☆ Modern, comfortable rooms

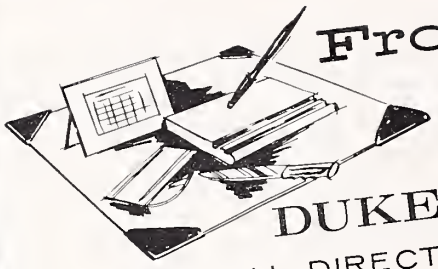


- Open medical staff • 91 bed capacity
- Ratio of more than one registered staff nurse to every two patients
- All rooms air-conditioned • Spacious grounds cover ten acres
- Licensed and approved by Arizona State Department of Health
- Member of:
 American Hospital Association
 Arizona Hospital Association
 Association of Western Hospitals
 National Association of Private Psychiatric Hospitals
- Approved by:
 The Joint Commission on Accreditation of Hospitals
 and The American Psychiatric Association

Camelback Hospital

5055 North 34th Street
AMherst 4-4111
PHOENIX, ARIZONA

ARIZONA FOUNDATION FOR NEUROLOGY AND PSYCHIATRY
A Non-Profit Corporation



From The Desk Of

DUKE GASKINS, M.D.

MEDICAL DIRECTOR, HBA LIFE INSURANCE CO.

Doctor:

There's no paper blizzard at HBA.

If you're like me, you got enough paper work in med school to last a lifetime.

But let's face it. The tempo of the times, and specialization in our own profession, has made the written word a fact of life.

In only 5 out of 100 claims it is necessary for HBA to bother the doctor for additional information on a patient. You'll find the forms simple and straightforward.

Figure when your patient asks you to complete an HBA form, we needed it! We'll appreciate your promptness in returning the completed form.

Duke

THE HBA LIFE

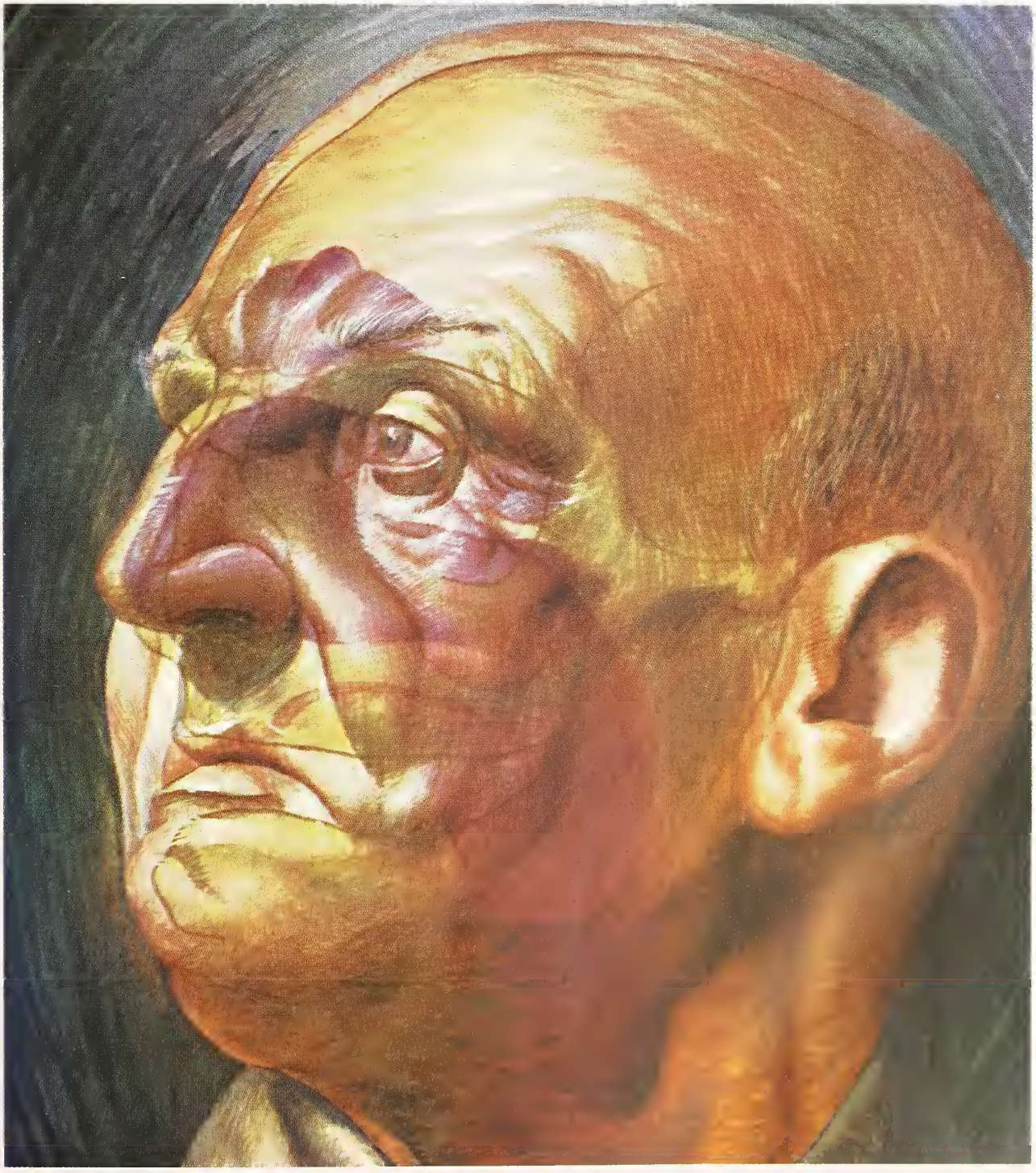
INSURANCE COMPANY

GROWING WITH THE ELEVEN WESTERN STATES

fall 1966

DORSEY Season

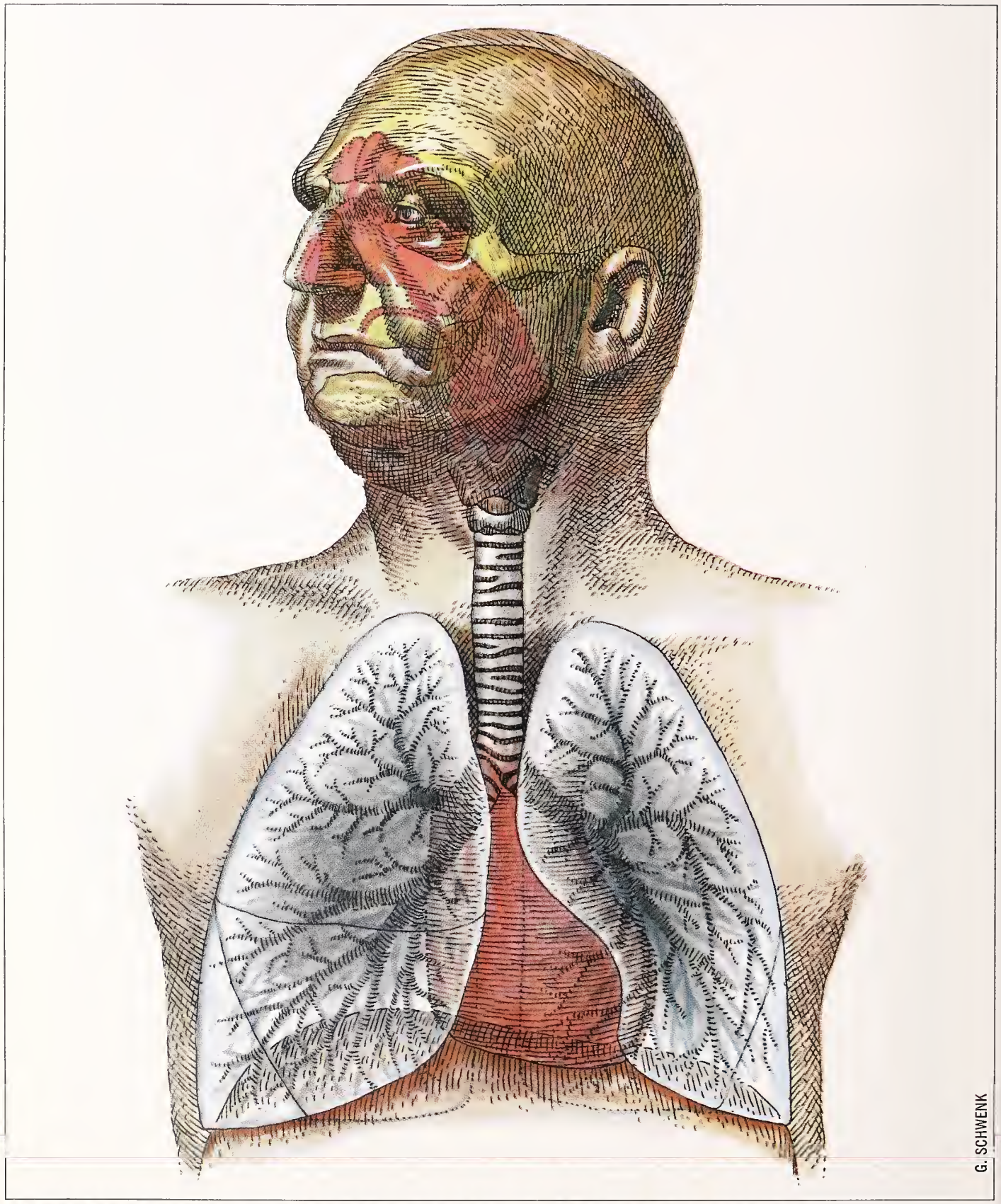
A journal within a journal published quarterly in the interests of better medicine by Dorsey Laboratories, a division of The Wander Company, Lincoln, Nebraska. Address communications to Raymond C. Pogge, M.D., Director of Medicine.



this issue: the common cold and the aging patient

the common cold and the aging patient

Louis J. Vorhaus, II, M.D., F.A.C.P.



Effects of aging on the anatomic and physiologic aspects of the respiratory apparatus.

The chest becomes more fixed, less mobile and less elastic as the bronchial walls and thoracic ligaments lose elasticity. The diaphragm and intercostal muscles atrophy and weaken. The lungs become smaller, flabbier and weigh less, decreasing vital and total lung capacity, increasing residual volume and the alveolar dead space.

Sir William Osler described pneumonia as the welcome friend of the aged patient, because the patient with pneumonia usually died quietly. But today, the well-informed physician is an even better friend of the aging patient, since it is better to live than to die, no matter how quietly.

One of the first avenues of approach in the control of the hazards of respiratory disease in the aging patient is prompt and proper attention to the common cold or upper respiratory infection. The common cold may be the first step in the relatively short path to lower respiratory infection, broncho-pneumonia and death. This train of events occurs frequently among older persons. Indeed, pneumonia is one of the most common causes of their admission to hospitals and ranks high on the list of geriatric killers. Colds are more debilitating in elderly people and the aged are more likely candidates for secondary infections such as sinusitis and bronchitis. These infections, in turn, are more prone to lead to broncho-pneumonia, because of lowered resistance and anatomic and physiologic changes in the lungs of the elderly.

What is different about the respiratory tree of an aged person and that of an otherwise healthy younger adult? Aging certainly takes its toll on all parts of the body, affecting both anatomic and physiologic aspects of the respiratory apparatus. These changes are in part due to the wear and tear that occurs over the years; the repeated bouts of respiratory infection, long exposure to atmospheric pollutants, to occupational inhalants, smoking, malnutrition, obesity, inactivity and the development of other diseases which may affect the lungs.

With the passage of years, the lungs change. They become scarred and emphysematous and lose their compliance. The whole chest becomes more fixed, less mobile and less elastic.

The anatomic changes that occur in aging render the lungs less efficient. Tests of pulmonary function in senescence show a deterioration characterized by a decrease in vital capacity and total lung capacity, an increase in residual volume and alveolar dead space. Maximum breathing capacity is reduced and uniformity of ventilation deteriorates. These problems are often aggravated by the obstructed breathing, fever and secondary infection associated with the common cold, placing an additional stress on the entire cardiopulmonary reserve.

In addition, the efficiency of a cough is below par in older persons even though they are in good health. This is partly due to the decreased respiratory excursions and distensibility of the chest wall, and partly from loss of elasticity of bronchial walls which tend to make them collapse in a cough.

The elderly patient's resistance to infection is often reduced. Nutritional deficiencies are more common in aged people. There is some evidence to indicate that their capacity to respond to stress is less efficient. Finally, there is often relatively meager symptomatic response to acute disease. The absence of obvious or dramatic clinical signs and symptoms of severe illness is particularly dangerous because, coming as it

(concluded on following page)

it's a
comforting thing
to know



For postnasal drip, clogged ears
and stuffed and runny noses

Triaminic® timed-release tablets

keeps patients comfortable 'round the clock. 24-hour decongestion on just a single tablet dosed morning, mid-afternoon and at bedtime. Patients regain senses and can breathe, smell and taste again.

Triaminic. Isn't that a comforting thing to know?

Each timed-release tablet contains:

Phenylpropanolamine hydrochloride	50 mg.
Pheniramine maleate	25 mg.
Pyrilamine maleate	25 mg.

Side effects: Occasional drowsiness, blurred vision, cardiac palpitations, flushing, dizziness, nervousness or gastrointestinal upsets. Precautions: The patient should be advised not to drive a car or operate dangerous machinery if drowsiness occurs. Use with caution in patients with hypertension, heart disease, diabetes or thyrotoxicosis.

(Advertisement)

does in a person whose defenses are weakened both locally and systemically, pulmonary disease may progress rapidly to irreversible stages before medical attention is sought. Respiratory infection is especially hazardous because the aged patient responds badly to hypoxia. Not only is his response to oxygen lack impaired, but the work of breathing, due to decreased compliance of the lung and increased stiffness of the thorax, is markedly augmented.

Many patients late in life are in a precarious and delicate cardiopulmonary balance which is easily decompensated from relatively minor insults such as colds and upper respiratory infections.

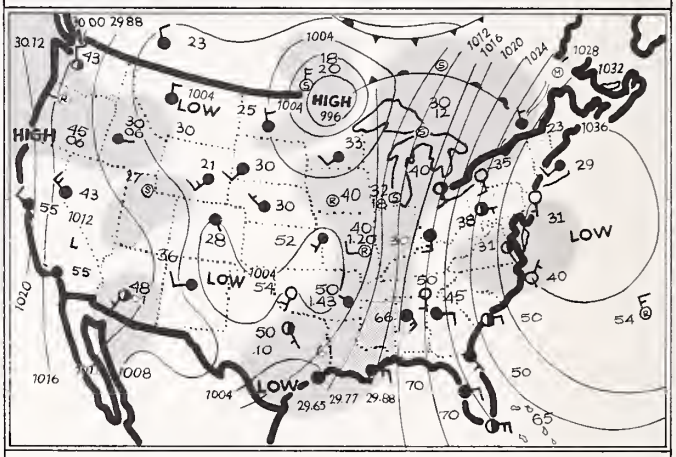
For all of these reasons, geriatricians long have stressed the importance of preventing respiratory insults. Today we have better ways of treating respiratory infection, improved techniques for clearing the lungs and bronchial tubes of secretions and better understanding of ways of improving ventilation. We possess a broader spectrum of antimicrobial agents including newer ones to deal with previously resistant organisms. Even so, the death rate from pneumonia is high in older people, and it is preferable to avoid the disease than to treat it. To do so, attention must be paid to the general maintenance of good health and all that implies, as well as to the prevention, elimination and treatment of associated conditions that predispose to or cause pneumonia such as chronic upper or lower respiratory infection, respiratory allergy, chronic sinusitis and exposure to inspired irritants.

Colds and other minor respiratory infections, which favor the development of broncho-pneumonia, should be treated vigorously and promptly, particularly those patients whose aging process has been accompanied by the development of chronic pulmonary disease. Upper respiratory passages should be cleared with decongestants. Sinuses should be drained adequately. And, when indicated, appropriate antimicrobial therapy should be instituted before serious infection of the lower respiratory tree supervenes.

In decades past it was understandable that physicians welcomed pneumonia for the aged patients because it offered them a quiet and peaceful demise. Today we recognize that in many cases, peaceful as it may have been, such deaths were often avoidable. With the current knowledge and understanding of the problems that respiratory infections impose on aging people, vigilant medical attention can often restore them to a vigorous, rewarding and productive life so that the many opportunities that exist today for people to enjoy their golden years are realized and not stolen by untimely death.

References 1. Steiglitz, Edward J., Geriatric Medicine, Medical Care of Later Maturity, 3rd edition, J. B. Lippincott Co., Philadelphia, 1954. 2. Norman, J. R., Schweppe, I. H., Salazar, E. and Knowles, J. H., Lung Volumes and Aging, Journal of the American Geriatrics Society, 12, pp. 38-47, January 1964. 3. Penman, Robert W. B., Hypoxia and Respiratory Failure, Geriatrics, 18, 807-814, November 1963. 4. Middleton, William S., Some Medical Dissections on Aging, Geriatrics, 18, 168-73, March 1963. 5. Cole, M. B. and Roberts, F. E., Clinico-Pathologic Study of Emphysema, Journal American Geriatrics Society, 12: 415-419, May 1964. 6. Horton, Glenn, Testing of Pulmonary Function, Geriatrics, 17:73-81, February 1962. 7. Banyai, Andrew L., Cough and its Management in Elderly Patients, Geriatrics, 14:621-630, October 1959. 8. Howell, T.H. and Piggot, A. P., Morbid Anatomy of Old Age, Geriatrics, 8:267-72, March 1953.

Weather Forecast Throughout the Nation



RAIN TURNING TO SNOW, INCREASING WINDS AND DROPPING TEMPERATURES FOLLOWED BY COUGH, CONGESTION AND PAIN

Tussagesic® provides up to 24-hour coverage of the tough cold with a single timed-release tablet dosed morning, midafternoon and at bedtime. Coughs are broken up, runny and stuffed noses are cleared and pain is relieved.

Each Tussagesic® timed-release tablet contains:

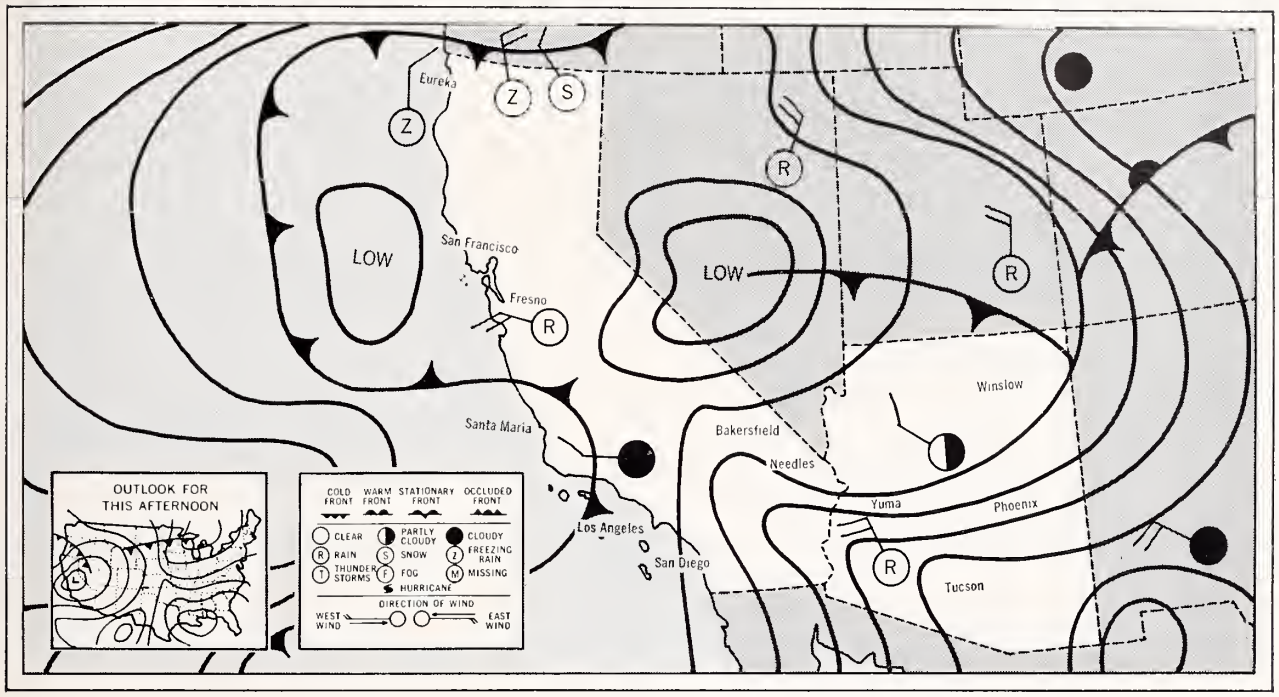
Triaminic®	50 mg.
(phenylpropanolamine hydrochloride 25 mg.; pheniramine maleate 12.5 mg.; pyrilamine maleate 12.5 mg.)	
Dextromethorphan hydrobromide	30 mg.
Terpin hydrate	180 mg.
Acetaminophen	325 mg.

Side effects: Occasional drowsiness, blurred vision, cardiac palpitations, flushing, dizziness, nervousness or gastrointestinal upsets. Precautions: Patient should not drive a car or operate dangerous machinery if drowsiness occurs. Except under professional care, do not give to patients under 12 yrs. or those who have persistent cough, high fever, heart or thyroid disease, hypertension or diabetes or use for more than 10 days.

(Advertisement)

REGIONAL WEATHER FORECAST

Heavy Rains, Local Flooding, Snow and Colder Followed by Cough, Stuffed and Runny Noses and Aches and Pains.



Tussagesic breaks up coughs, quickly clears stuffed and runny noses and relieves aches and pains. Provide coverage of the tough cold for up to 24 hours with just a single timed-release tablet dosed morning, midafternoon and at bedtime.

each

Tussagesic®

timed-release tablet contains:

Triaminic® (phenylpropanolamine hydrochloride 25 mg., pheniramine maleate 12.5 mg., pyrilamine maleate 12.5 mg.)	50 mg.
Dextromethorphan hydrobromide	30 mg.
Terpin hydrate	180 mg.
Acetaminophen	325 mg.

Dosage: Adults—1 tablet, swallowed whole to preserve timed-release feature, in morning, midafternoon and at bedtime. *Side effects:* Occasional drowsiness, blurred vision, cardiac palpitations, flushing, dizziness, nervousness or gastrointestinal upsets. *Precautions:* The patient should be advised not to drive a car or operate dangerous machinery if drowsiness occurs. Use with caution in patients with hypertension, heart disease, diabetes or thyrotoxicosis.

DORSEY LABORATORIES • *a division of The Wander Company* • **LINCOLN, NEBRASKA**

when congestion is complicated by sulfa-susceptible bacterial invaders in the upper respiratory tract...



re-enforce your decongestant therapy

prescribe economical **Trisulfaminic®**

Each tablet contains: Triaminic® 25 mg. (phenylpropanolamine hydrochloride 12.5 mg., pheniramine maleate 6.25 mg., pyrilamine maleate 6.25 mg.); Trisulfapyrimidines, U.S.P. 0.5 Gm. (sulfadiazine 0.167 Gm., sulfamerazine 0.167 Gm., sulfamethazine 0.167 Gm.)

PHARMACOLOGY: Triaminic decongests and promotes drainage of nasal and paranasal passages, and prevents any further histamine-induced damage; the triple sulfonamides inhibit susceptible bacterial invaders. INDICATIONS: For congestion and infection of the upper respiratory tract caused by sulfa-susceptible organisms. DOSAGE: Adults: 2 to 4 tablets initially, followed by 2 tablets every 6 hours. Medication should be continued until patient has been afebrile for 3 days. ADVANTAGES: The advantages of Trisulfaminic in upper respiratory infections are: freedom from narcotics or alcohol; therapeutic reliability; safety; economy; ease of administration; freedom from potential sensitization to broad-spectrum antibiotics which may be reserved for lower respiratory or other infections caused by susceptible organisms. CONTRAINDICATIONS: Contraindicated in sulfonamide and antihistamine sensitivity, impaired renal function, pregnancy approaching term, and in premature infants and newborn infants during the first month of life. Do not use in patients with glaucoma, prostatic hypertrophy, stenosing peptic ulcer, pyloroduodenal or bladder neck obstruction. WARNING: Use only after careful evaluation in patients with liver or renal damage, urinary obstruction, or blood dyscrasias. Deaths have been reported from hypersensitivity reactions with administration of sulfonamides. In intermittent or prolonged therapy, blood counts and liver and kidney function tests should be performed periodically. Sulfonamide therapy may potentiate the hypoglycemic action of sulfonylureas. PRECAUTIONS: Use with caution in patients with histories of significant allergy or asthma. Assure an adequate fluid intake. Because the antihistamines may cause drowsiness of varying degree, warn patients about activities requiring alertness such as driving a car or operating dangerous machinery. Use with caution in the presence of hypertension, hyperthyroidism, cardiovascular disease and diabetes. ADVERSE REACTIONS: As in all sulfonamide therapy, the following reactions may occur: headache, nausea, vomiting, diarrhea, icterus, hepatitis, pancreatitis, urticaria, rash, fever, cyanosis, hematuria, crystalluria, proteinuria, blood dyscrasias, petechiae, purpura, neuropathy and injection of the conjunctiva and sclera. If one or more of these reactions occur, the drug should be discontinued. With antihistaminic therapy there have been reports of sedation varying from mild drowsiness to deep sleep, dizziness, lassitude, inability to concentrate, fatigue, incoordination, tinnitus, blurred vision, diplopia, euphoria, nervousness, insomnia, tremors, palpitation, hypotension, headache, chest tightness, urinary frequency, dysuria, tingling of the hands, dryness of the mouth, throat, and nose, gastrointestinal disturbances such as epigastric distress, anorexia, nausea, vomiting, constipation and diarrhea and very rarely, leukopenia and agranulocytosis. Adverse reactions reported with the use of sympathomimetic amines include anxiety, tension, restlessness, nervousness, tremor, weakness, insomnia, headache, palpitation, tachycardia, angina, elevation of blood pressure, sweating, mydriasis, anorexia, nausea, vomiting, dizziness, constipation, and dysuria due to vesicle sphincter spasm. PACKAGE INFORMATION: Trisulfaminic Tablets: Supplied in bottles of 100 tablets. CAUTION: Federal law prohibits dispensing without prescription.

DORSEY LABORATORIES • *a division of The Wander Company* • **LINCOLN, NEBRASKA**



Paul B. Jarrett, M.D.

". . . which is the life thereof."

One of our colleagues told of a mother who brought in her five-year-old boy with an inguinal hernia. After arrangements had been made for surgery the mother announced that they belonged to a religious group that did not accept or permit the transfusion of blood, and asked the doctor to promise that he would not administer blood to the child regardless of need.

The physician told her that he had never had to transfuse a child undergoing a hernia repair and that the chances that such transfusion would be needed were less than a thousand to one, but nevertheless could not have restrictions placed on his training, experience and judgment in an attempt to help his patient.

The mother, true to her convictions, cancelled the surgery and went elsewhere to find a surgeon who gave her such a promise, supposedly. At any rate, the child had surgery at other hands a few weeks later.

What position the physician should take under these circumstances is a matter of individual conscience, but the problem poses interesting ethical, philosophical and moral questions.

If a patient has the right to determine whether or not he shall be operated upon, does he have the right by the same token to impose restrictions that might affect the outcome of that operation?

What about children who do not make decisions as to whether or not they will undergo surgery in the first place? Does one acquire the religious convictions of one or both parents by inheritance, inunction, or perhaps by persuasion over the passage of years?

What about the doctor? Is he in the position of a tradesman who is told when and how high to build a shelf, when he is told what use of his skill and knowledge he may employ and what he may not?

The sincerity of patients who will not accept blood cannot be questioned. They believe they have a direct command from God not to have anything to do with blood or blood products, and that death is preferable to breaking this commandment.

The question for the doctor to decide is whether he can lend himself to a situation where he must be a party to permitting someone to die when they might be saved by the use of blood.

The decision might be easier with an older patient, but the basic fundamentals are much the same. I suppose the physician can be of more help by lending what skill is permitted than by refusing to do anything if restrictions are imposed upon him. Still, if a physician cannot accept these restrictions, the patient should appreciate the fact that to some doctors failure to do something that might save a life is just as onerous as deliberately doing something that would take a life.

We have no official policy. What do you think about this? The Editor would probably be delighted to print your opinions if you write me.

Paul B. Jarrett, M.D.



"Yes, Doctor, the pain is gone."

Despite introduction of synthetic substitutes, efficacy of 'Empirin' Compound with Codeine remains unchallenged.

'Empirin'® Compound with Codeine Phosphate gr. ½ No. 3

Each tablet contains: Codeine Phosphate gr. ½ (Warning—May be habit forming), Phenacetin gr. 2½, Aspirin gr. 3½, Caffeine gr. ½.

Keeps the Promise of Pain Relief

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

ADMISSION TO MEDICAL SCHOOL

When the Arizona Medical School Study was published in the summer of 1961 it contained the statement: "Data accumulated by the Study Staff suggest that by 1970 there will be more than 50,000 students enrolled in Arizona universities and colleges." Most estimates and projections of this kind are received with scepticism bordering on frank disbelief in spite of the fact that the majority of them are overly conservative when they are made. The result is that they usually underestimate the true state of affairs. This has already proven to be true in Arizona where the projection, when made, was thought to be exaggerated. However, the figure of 50,000 students enrolled in Arizona universities and colleges turns out to have been realized not in 1970 but in 1964!

This remarkable growth, when added to the immense interest which has developed subsequent to the announcement that a medical school would be started in Arizona, has had an impact on the application rate for admission into the first medical school class that can only be described as overwhelming. Prior to accepting the applications themselves, we had had over 1,200 letters of inquiry from persons who were either potential students or the parents of such students. The first application blanks were mailed from our office late this last summer, each in response to a specific request. By mid-September we had mailed 650 and we are currently responding to these requests at the rate of about ten per day. Applications close on January 15, 1967. Of course, each potential student may be, and usually is, applying to several different medical schools. Therefore, these numbers do not reflect the actual competition which each applicant faces; but, the unexpectedly large number of applications does mean that competition for places in the entering class will be quite severe. And, since it will be necessary to hold the size of the entering class to 32 for the first two or three years (until we are certain that the basic science and clinical faculty, facilities and supporting services are ready for the load), the competition will be even greater.

Some candidates will be much better prepared for entrance into medical school than others and those who are charged with the responsibility for selecting the first class will already be well along in this effort to do so even as this message is being read. In the meantime, we have a great deal of evidence that many of Arizona's physicians are becoming involved as "advisers" or as "friends" of applicants. This is as it should be and, with the hope that a little additional information may be helpful to those of you who are so involved, the following material is summarized.

Other factors aside for the moment, preference will be given to the student who is a legal resident of the state of Arizona. Second, we will probably favor candidates from the WICHE states which do not have medical schools operating within their jurisdiction (Alaska, Idaho, Montana, Nevada, Wyoming). This policy, of course, is intended to be of assistance to the remaining WICHE states by decreasing their out-of-state loads so they can do a more equitable job in servicing their own, resident students. Third preference will go to students who are residents in the remaining WICHE states (California, Colorado, Oregon, Utah and Washington) since these are the states which have accepted the responsibility for training so very many of our students up to now. After these states come the others. Note that two WICHE states (Hawaii and New Mexico) are classed with the "others" since these states have not previously educated Arizona students in medicine but now have new medical schools themselves.

We have had a modest number of applications from students from other countries but it seems unlikely that we will do anything to encourage such applications, especially at this early stage, since the local obligation is so heavy and since we cannot license such students later if they were to graduate from our school.



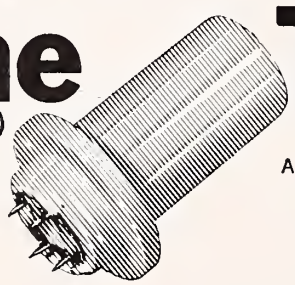
what time is it?

For the past
two years
there's been
one new case
of active tuberculosis
reported for every
four thousand
of U.S. population.

it's time to tine.

Tuberculin, Tine Test

(Rosenthal)



Lederle

Available in 5's and 25's.
Order now
from your pharmacist
or your Lederle
representative.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York

414-6—4046R

PRINCIPLES OF MEDICAL ETHICS

SECTION 7

In the practice of medicine a physician should limit the source of his professional income to medical services actually rendered by him, or under his supervision, to his patients. His fee should be commensurate with the services rendered and the patient's ability to pay. He should neither pay nor receive a commission for referral of patients. Drugs, remedies or appliances may be dispensed or supplied by the physician provided it is in the best interests of the patient.

SECTION 8

A physician should seek consultation upon request; in doubtful or difficult cases; or whenever it appears that the quality of medical service may be enhanced thereby.

Ezra Pound wrote:

"They will come no more,
The old men with beautiful manners."

In the limbo of medical school — and it really was an abode of forsaken spirits — there was little time for intellectual pursuit or for the development of acsthetic taste. The casualty is that cultural growth seems to stop alongside physical growth in those who enter the leisureless professions: they enjoy no richer music than they heard at high school dances.

Nowhere is the doctor's breeding more apparent than in the hospitality of consultation. It is as if the attending physician and his patient are to be host and hostess to the specialist, their guest.

The invitation will be worded politely, of course, and never with rudeness to the office nurse or secretary. And the invitation will surely take into consideration the fact that the consultant has a schedule of his own. He is not just perusing journals, idly awaiting a call. Lastly, the specialist will not be euchred into the humiliation of arriving to examine a patient who has neither approved nor even been informed of his coming.

The thoughtfulness of the consultant, on the other hand, cannot always be taken for granted. He must remember that he is a guest. He will not keep his host waiting indefinitely. He will not barge in and take over. He will not be patronizing nor preen his own feathers by making arbitrary or trivial changes in the orders or in the wording of the attending physician's diognosis.

In all the practice of medicine there can be no more inspiring and mutually rewarding an experience than having or being a consultant. Noblesse oblige.

William B. McGrath, M.D.

GO
RIGHT
DOWN
THE
LINE
AND
YOU'LL
FIND
THERE
IS
NOTHING
BETTER*
THAN

Blue CROSS
BLUE *Shield*

**except Good Health*

NAME: DOCTOR OR PHYSICIAN

Leslie B. Smith, M.D.

Through the lips of Juliet, Shakespeare questioned "What's in a name?" By adding "That which we call a Rose by any other name would smell as sweet" he suggested that a name may not be important. However, the application of names with meaning is indispensable to the formulation of ideas, images and their classification. Descriptive words and phrases, which designate certain features, qualities and characteristics, give the name sufficient distinctive attributes to place it into recognized categories or a specific image.

During the last three decades the Public Image of the Medical profession and its doctors has deteriorated ignominiously (LIFE, June 24, July 15, 1966).

There are many factors to be reckoned in answer as to why this change in image has come about. What role has been played by using the title Doctor rather than Physician? Possibly, as was suggested by Shakespeare, " 'Tis but thy name that is my enemy."

There has been some modification of the belief that doctors are capable, lovable, considerate, "horse-and-buggy servants," who are unselfish in the ministration of their personal services. It is paradoxical that these conceptions could and did change, for the worse, during a period in which the quality of medical care was the highest ever known, and the standard of living exceeding any imaginary conceptions. However, with the miracles of the antibiotics, vascular surgery, etc., the people became complacent while they lost many freedoms.

We shall not in this space debate the issues. There has been wanton villification of the medical profession which continues. Some well intending citizens and politicians, through misinformation, were actually duped into falsely believing that a socialistic state would be preferable to our Republic.

The socialization of Medicine has been recognized as the Keystone of the Socialist State; hence it was essential to their cause that the wholesome image of the doctors and their medical profession should be replaced with a gruesome, repulsive picture which would destroy or lessen their influential social position.

The Saturday Evening Post became so emotionally unrestrained during the rapid shifting to the left that it stated "The doctors as a group have in essence been against everything that America has been for." This unsupportable accusation had been proposed by the Socialist Party, and its members, and non-member national socializers, labor leaders, and directors of their Committee on Public Education. Many hundreds of articles were written. Illustrations of a few are "The Conspiracy of Silence" by Philip Wylie, "Ghost Surgeons," "Why Doctors Should Be In Jail," and "Why You Can't Afford To Be Sick." Yet, there were still those who respected their Doctor. After Philip Wylie wrote page after page emphasizing doctors' weaknesses and wrongdoings, he stated "For I have no doubt that, among all human beings, on the Great Ledger of Sacrifice, Integrity and Absence of Hypocrisy, doctors stand first — even, in my

opinion, above clergymen! That does not prevent me, however, from claiming that their studied avoidance of a certain kind of responsibility for themselves amounts to a moral racket."

The most recent of such careless reporting (LIFE, June 2 and 14, 1966) wails about the doctors who own pharmacies and profit excessively by the sale of their products, including glasses. The physicians have fought this beginning with Hippocrates, 500 B.C. Even though it is the 3% to 5% incorrigibles who so offend socicty, it is wrong, and the profession will try to stop this exploitation.

James Bryce stated that "Medicine is the only profession that labors incessantly to destroy the reason for its own existence."

The Medical profession has had no need to bow its head in shame because of its achievements in the improvement of the health of our people. The records are clear, available and with tangible evidence about us at all times. The accomplishments were frequently due to the urgently solicited cooperation and direction of the Legislative and Executive branches of government — from the precinct to the White House.

We need only to reflect upon purposes of the founding of the American Medical Association which were chiefly concerned with the control of the quality of medical education, the elimination of Quackery and witching, the enactment of laws to improve the sanitation for health's sake, and the licensing of Doctors of Medicine by the separate states to eliminate the unqualified.

It is absurd that it is necessary to so frequently remind the people to count their blessings by reference to the increase in the life span, the virtual elimination of those diseases, which killed by the millions, such as smallpox, typhoid fever, tuberculosis, pneumonia, many so-called "children's diseases," malaria and yellow fever.

During all this disfiguring of the doctor's public image, particularly the organized profession, periodic accurate surveys, polls, group and individual studies repeatedly showed that about everybody's personal physician was an admired, dependable, willing person who was not guilty of overcharging, selfishness or a disinterested person who robbed with a scalpel rather than a gun. Paradoxically, these same citizens were willing to believe, and did so, that about all other members of the medical profession were obvious guilty offenders.

This incongruity is beyond any sense of logic. It is as faulty as the statement "I know and see one black sheep in the flock, therefore all sheep are black."

There are many varicties of doctors attested by their academic degrees (DDS, DO, DVM, PhD, Doctors of Chiropractic, Optometrists, etc.), and many kinds of medical doctors. Could it be that misidentification has occurred because the medical profession has failed to recognize and be classified under the proper nomenclature? What application is the most fitting for the doctors of medicine that would distinguish the physicians from the heterogenous groups who are now referred to as doctors — physicians, medical physicians, healers, medical healers, medical scientists, medicine, medical profession, surgeon or Doc?

It is fun, as well as revealing, to do a little parlor research. Select a few of the names so frequently used to specify doctors of medicine and ask your friends — or, since "doctors no longer have friends," enemies will suffice — to describe to you the image of the persons they associate with the respective names, along with the mention of their emotional responses to each.

A historical survey may delightfully dispell some of the apprehensions by affirmation of Medicine's contributions to society, its positions and responsibilities. All of which, at this time, may give needed comfort to the deflated egos.

For over three thousand years the name of PHYSICIAN has been attached to those recognized to have talent, knowledge and training in the arts of healing.

During the Greek-Roman period (2000 B.C. to A.D.) "The sick flocked to the temples of Imhotep (Grand Vizier of King Zoser), as it was (2000 years later) in the temples of Aesculapius." He was a renowned physician from Thessaly who was named the God of Healing about 293 B.C.

The teachings of Hippocrates down through the centuries have been the greatest influence for good. He realized the necessity for love and

kindness; that healing of the sick was the primary dedication of physicians and that they do not seek unsavory acclaim. He indelibly impressed that the physician must maintain the highest moral standards.

Prior to and even during the renaissance (1450 B.C.-30 A.D.) the name doctor was seldom used except as it applied to civil law. Almost from the beginning, as evidenced by Joseph, "Physician" has been used, as was "rapha," to designate a professional physician.

The first degree of Doctor was issued toward the end of the 12th century in Babylonia in civil law — later the doctorate degree was issued to distinguish those individuals who accomplished high academic levels. For many years the holders of M.D. degrees exceeded all others. The title "Doctor," by usage, almost exclusively meant Doctor of Medicine. As education enlarged rapidly in the 19th and 20th centuries, numerous doctorate degrees were earned by those who were not associated with the art or science of healing.

Over a historic period of about 5000 years the name of Physician has been used to specify healers. Virtually all healers are trained in the art and science of Medicine who qualify for a doctor's degree in medicine, with further qualifications as attested by a license granted by the various states. Most of the religious healers are not to be recognized as uncontrolled healers, as long as their acts conform to the established tenets of a group.

Joseph used the name Physician in reference to those trained and gifted in the healing arts — the doctor medicine. For about 5000 years the name physician was almost singularly confined to medical healers. The Ancient Priests, as healers, along with the primary indelible influences of Hippocrates, endowed the healing profession with an undeniable enviable morality.

The man from Galilee did not call himself a doctor, a title to which he was entitled at that time — he said unto them, "Doubtless ye will say unto me this parable," 'Physician, heal thyself'."

Those who have been awarded a doctorate degree in medicine are physicians trained in the healing arts and science of medicine. Collectively they form the Medical Profession. The accomplishments of these noble, dignified healers from ancient time through today entitle them to be set apart from the many non-medical doctors, as only the name PHYSICIAN does.

FOR YOUR PERMANENT FILE



HANDSOME, DURABLE WHITE & GOLD VINYL COVERED BINDERS TO PRESERVE PAST ISSUES OF ARIZONA MEDICINE. EACH BINDER HOLDS UP TO TWELVE ISSUES.

ONLY $3.00 EACH

Arizona Medicine

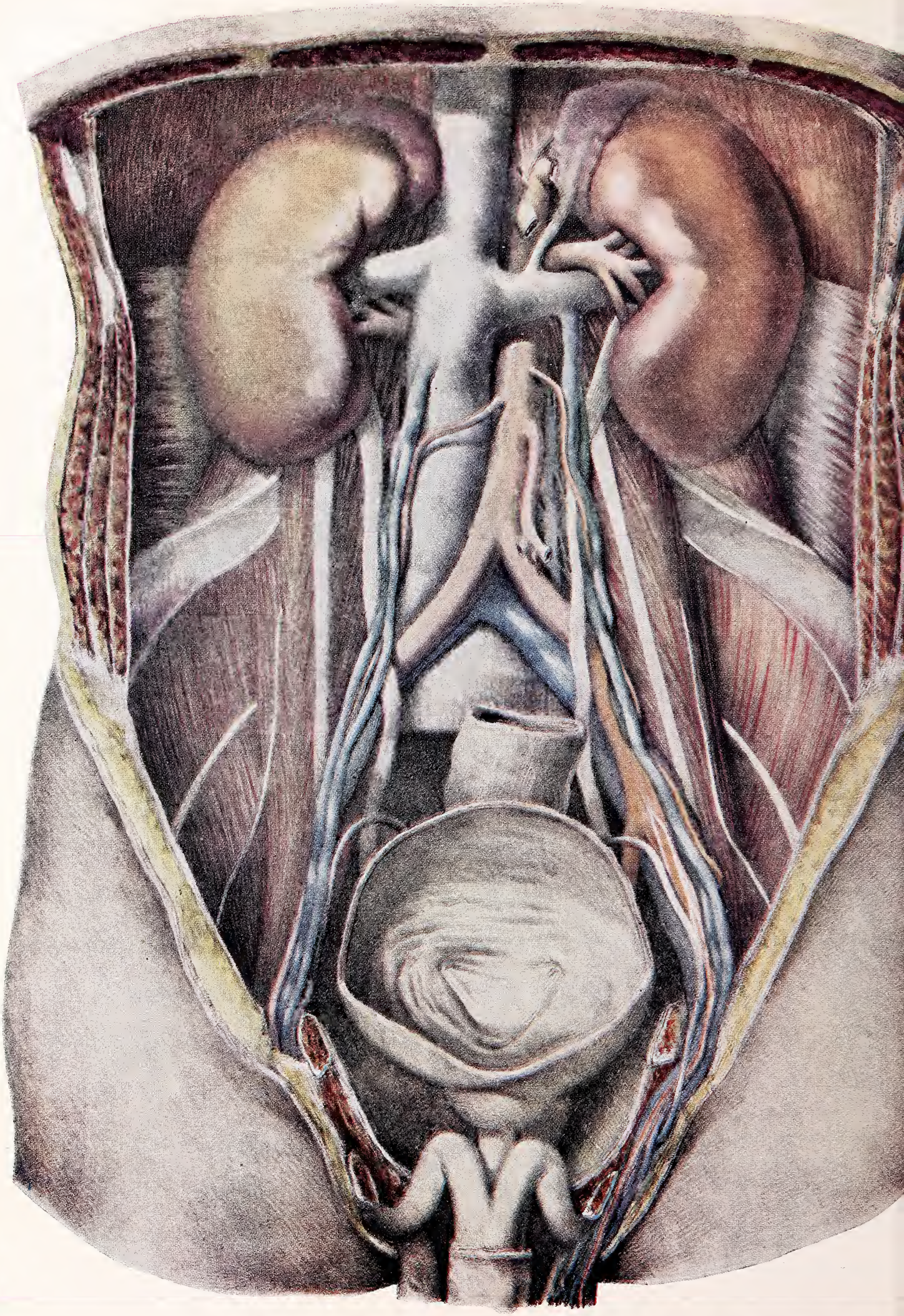
4601 N. Scottsdale Rd., Scottsdale, Ariz., 85251

Name _____

Address _____

PLEASE SEND _____ BINDERS

I understand that these will be billed to me at the rate of $3.00 each.



Wide-range bactericidal action for genitourinary infections

NEW OMNIPEN® (AMPICILLIN) WYETH

A penicillin that exhibits effectiveness within the gram-positive spectrum of penicillin G* and the gram-negative spectrum of chloramphenicol and the tetracyclines.*

Active at foci of infections—kidney, ureter, bladder or urethra.

Effective against many gram-negative and gram-positive pathogens—thus may be valuable not only in genitourinary but also in common respiratory and gastrointestinal infections.

Normally produces high and persistent levels in blood and high concentrations in bile and urine.

Significant inherent stability.

**Exclusive of penicillinase-producing bacteria.*

Indications: Urinary tract infections, especially those caused by *E. coli*, *Proteus mirabilis*, and *Streptococcus faecalis* and *viridans;* respiratory infections caused by *H. influenzae*, pneumococci, streptococci, and nonpenicillinase-producing staphylococci; and gastrointestinal infections caused by *Shigella* and *Salmonella*, including *Sal. typhosa*.



Contraindications: Hypersensitivity to penicillin; infections due to penicillinase-producing staphylococci and other penicillinase-producing bacteria.

Precautions: If allergic reaction occurs, discontinue ampicillin and administer epinephrine, corticosteroids, antihistamines and/or pressor amines as indicated. Transient moderate elevation of SGOT values of undetermined significance was noted in a few infants. Liver and kidney function as well as hematopoietic tests are advisable during therapy, particularly in infants. As with other antibiotics, precautions should be taken against gastrointestinal superinfection. Safety for use in pregnancy has not been established.

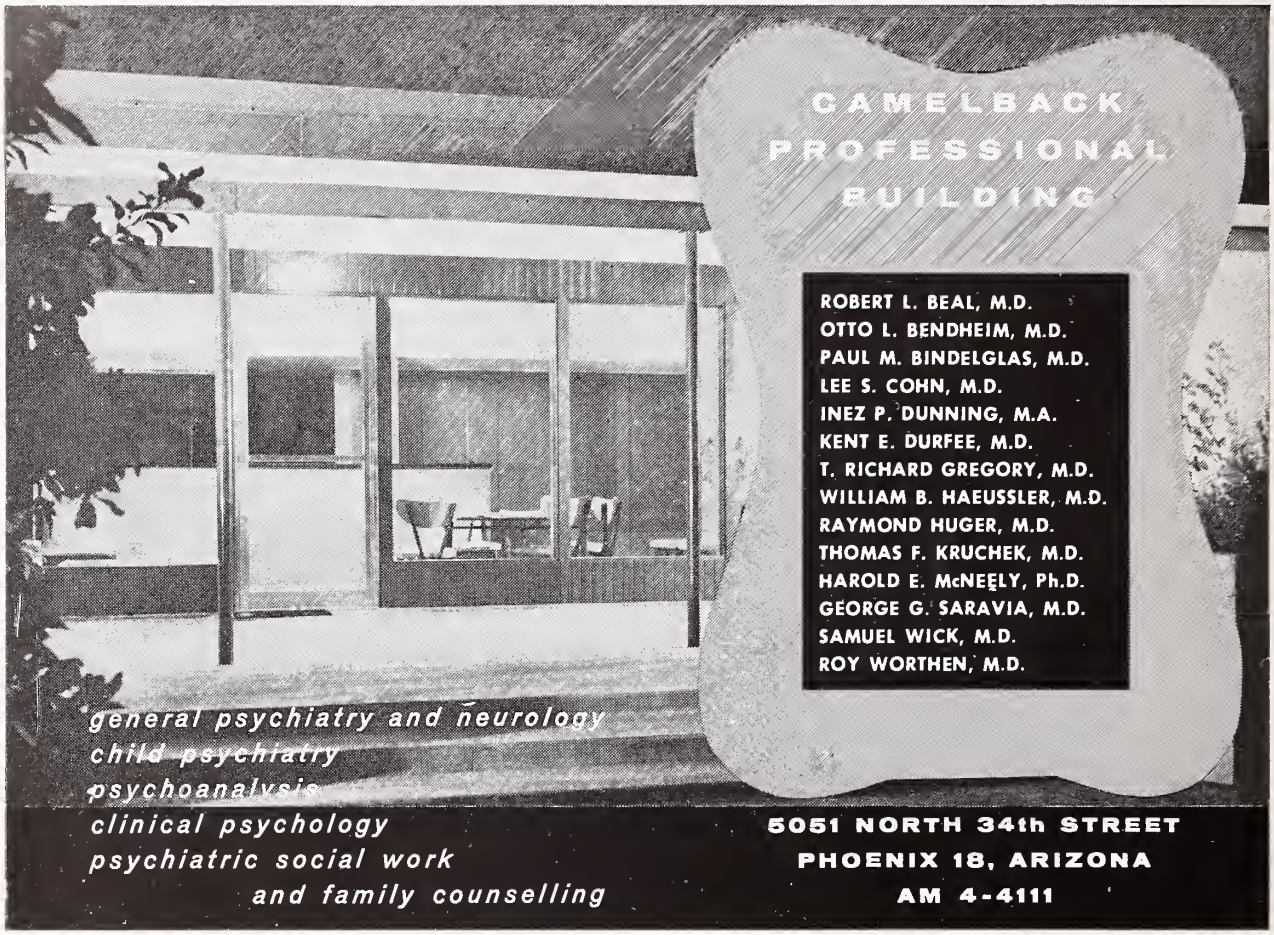
Adverse Reactions: Occasional mild side effects as urticaria, skin rash, pruritus, diarrhea, nausea and vomiting. There have been no reports of blood dyscrasias, liver or kidney damage. Anaphylaxis has been reported.

Composition: Capsules, 250 mg.

American Hospital Formulary Service Category No. 8:12.16.

Wyeth ® SERVICE TO MEDICINE

Wyeth Laboratories Philadelphia, Pa.



ROBERT L. BEAL, M.D.
OTTO L. BENDHEIM, M.D.
PAUL M. BINDELGLAS, M.D.
LEE S. COHN, M.D.
INEZ P. DUNNING, M.A.
KENT E. DURFEE, M.D.
T. RICHARD GREGORY, M.D.
WILLIAM B. HAEUSSLER, M.D.
RAYMOND HUGER, M.D.
THOMAS F. KRUCHEK, M.D.
HAROLD E. McNEELY, Ph.D.
GEORGE G. SARAVIA, M.D.
SAMUEL WICK, M.D.
ROY WORTHEN, M.D.

general psychiatry and neurology
child psychiatry
psychoanalysis
clinical psychology
psychiatric social work
and family counselling

5051 NORTH 34th STREET
PHOENIX 18, ARIZONA
AM 4-4111

THE DIAGNOSTIC LABORATORY

Complete Medical Laboratory Service, X-Ray Diagnosis
Radiation Therapy, Radioactive Isotopes



PATHOLOGISTS
Maurice Rosenthal, M.D.
George Scharf, M.D.
Seymour B. Silverman, M.D.
Bland Giddings, M.D.
Sidney H. Zuber, M.D.

RADIOLOGISTS
1130 E. McDowell Office — 258-1601
Marcy L. Sussman, M.D.
1901 E. Thomas Road Office — 274-3603
Edward L. Batts, M.D.
William S. Stone, M.D.
George A. Gentner, M.D.

Diplomates of the American Boards of PATHOLOGY and RADIOLOGY

1901 East Thomas Road • Phoenix, Arizona • Phone 264-2101



The Professional Way...

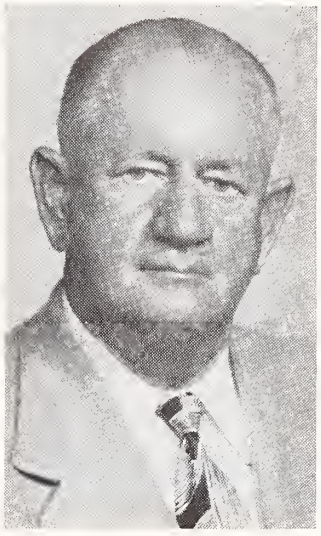
When You Have A Checking Account at First National Bank, You Enjoy These Exclusive Features:

FREE IMPRINTED MURAL DESIGN CHECKS
with full name and address!

GUARDIAN CHECK CASHING SERVICE
for easy check-cashing identification!

CREDIT RESERVE
the revolving loan you may write through your checking account!

1st FIRST NATIONAL BANK OF ARIZONA
MEMBER F.D.I.C. • FEDERAL RESERVE SYSTEM



Eugene A. Gatterdam, M.D.
1892-1966

Eugene A. Gatterdam, known as 'Gene' to his many friends, was born in LaCrosse, Wisconsin, moving to Arizona in 1921 where he was on the staff of Fort Whipple in Prescott. In 1930 he came to Phoenix and was in practice here until his death.

Dr. Gatterdam was one of the pioneers in the field of allergy, especially in Arizona where he was an authority on the local pollen bearing plants. He was also nationally known in this field.

Gene was a born fisherman. His second home was Rocky Point, a place he did much to develop, and it saw him every week-end of sailfish season. His arrival there was a sign for all sailfish to head for the Pacific or hang up and be photographed beside him. He had a permanent room at Hotel Penasco and did much to help the people of Rocky Point, and cement American-Mexican relations.

He specialized in using a bass rod and eight-pound test line when he wanted to show off, but when fishing for trophy sails or dolphin, he used a thirty-six pound line and a 250-yard Penn levelwind reel and a six-foot glass rod. His record was a 152-pound sailfish.

His dedication and care for his patients was in the finest tradition of the medical profession. He was greatly loved by all of them.

I have lost a very dear friend and partner, and we who were his friends are, I am sure, joined by those in Rocky Point in saying 'ADIOS AMIGO.'

John F. McKenna, M.D.

Squaw Peak Sketches

Of Pithy Pioneer Physicians

by dry gulch jake



ITEM

Passing a Picket Line

Whilst strolling along Canyon Diablo, mounted on a sturdy dromedary — one lump — a torn, tattered notebook caught our eye before said beast could sniff and devour it. 'Twas indeed an account by the late Dr. Brain — affectionately known as Shorty Brain to his colleagues — one-time psychiatrist in a motor city of the Midwest. Whilst Shorty Brain never had a couch in Arizona Territory — his ingenuity may catch your fancy.

Now if there was any delicacy that teased the taste of Shorty Brain more than Mary Lee Candies, he failed to note it in his "diary" which somehow came to rest in Canyon Diablo. Whilst the Royal Duke may have discarded his Mistress Clarke, the fact that marching pickets surrounded Mary Lee's Sweet Shoppe, this did not cool our doctor's ardor.

Dost thou not feel these streams of collative nervous impulses jumping the good Doctor's Synapses? With the winter season, it was easy to conceal the dreaded weapon: Doctor Shorty Brain strolled confidently into the midst of the pickets, shouted "gas." The disappearing pickets were so temporarily decerebated by this dastardly deed, that they retreated precipitously without shouting the Union battlecry "Scab."

This is how the good Doctor Shorty Brain passed the picket line to pay his affection to Mary Lee's confections!

ITEM

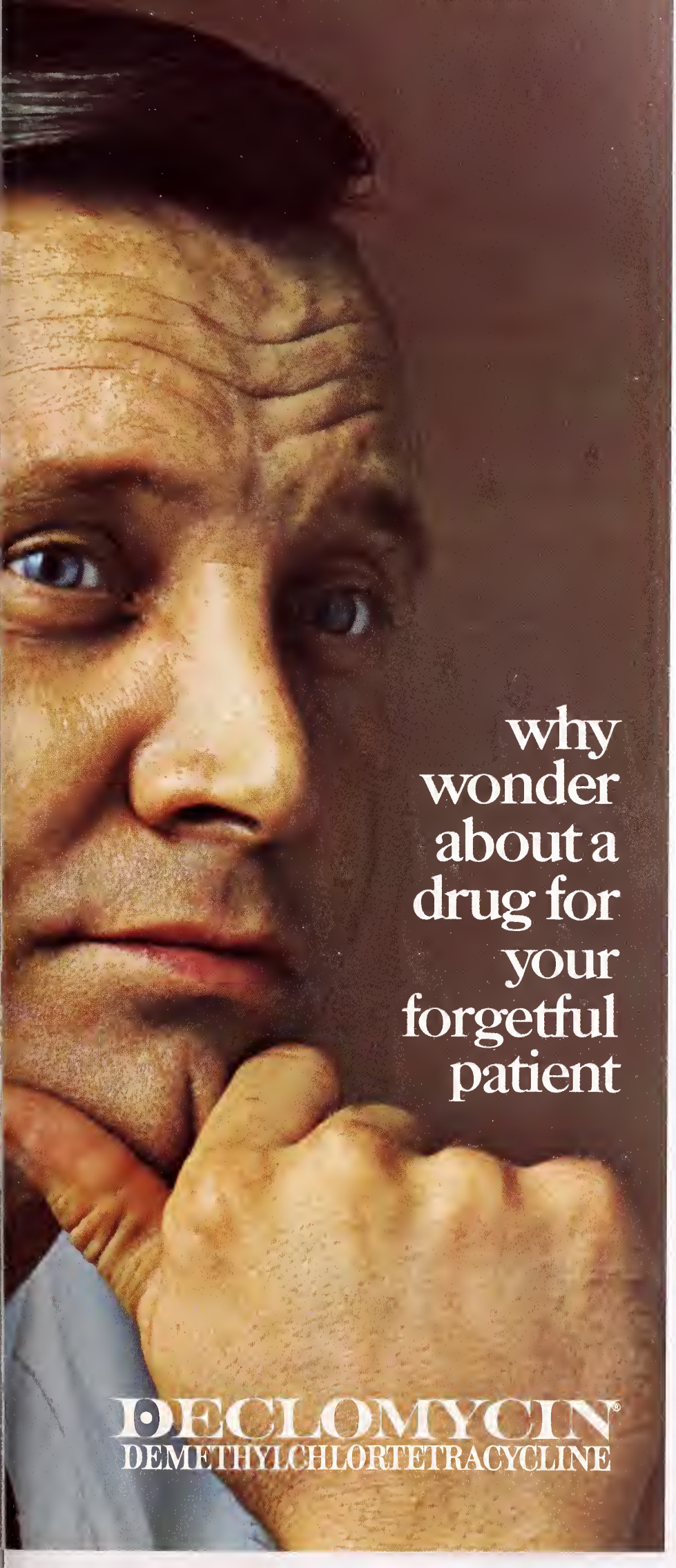
A letter from Kingman, Arizona, relates some of the problems encountered by the Health Officer there, this is dated Feb. 21, 1916.

"Dear Doctor Looney:

"Nearly all of us over here have been run to death and I find I have to get away for a while to prevent a break-down. I think the affairs at Oatman are in a way to a satisfactory solution. The garbage question is to be settled by their Chamber of Commerce . . . the Supervisors will appoint the man getting the contract a deputyship, so that the red tape will be eliminated. The County will build four public toilets, each one accommodating about 25, that is 20 places on the men's compartment and 5 or 6 for the women. The question of a disinfectant is a serious one. The prices quoted for chlorinated lime FOB Chicago is 14 cents per pound, this would mean something like 25 cents a pound in Oatman." He goes on to say that "the digging of the holes over in Oatman requires dynamite and about $50.00 to the hole, so that it is not a popular pastime."

This would suggest the relative proportion between the male and female population or does it really indicate that there was a disproportion of diarrhea amongst the male populous? In any event I think the writer put it quite succinctly when he said that digging a hole in Oatman was not a popular pastime in 1916.

John W. Kennedy, M.D.


why
wonder
about a
drug for
your
forgetful
patient
DECLOMYCIN®
DEMETHYLCHLORTETRACYCLINE

activity doesn't stop when dosage does

DECLOMYCIN®
DEMETHYLCHLORTETRACYCLINE 300 mg FILM COATED TABLETS
are made for b.i.d.

Effective in a wide range of everyday infections—respiratory, urinary tract and others—in the young and aged—the acutely or chronically ill—when the offending organisms are tetracycline-sensitive.

Contraindication—History of hypersensitivity to demethylchlortetracycline.

Warning—In renal impairment, usual doses may lead to excessive systemic accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort.

Precautions and Side Effects—Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. Use of demethylchlortetracycline during tooth development (last trimester of pregnancy, neonatal period and early childhood) may cause discoloration of the teeth (yellow-grey-brownish). This effect occurs mostly during long-term use but has also been observed in short treatment courses. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment. Side reactions include glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and dermatitis. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Anaphylactoid reactions have been reported.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products.

Capsules: 150 mg; *Tablets:* film coated, 300 mg, 150 mg, and 75 mg of demethylchlortetracycline HCl.

Lederle LEDERLE LABORATORIES
A Division of American Cyanamid Company, Pearl River, New York
423-6-4072



Adaptation from Shakespeare Rare Print Collection

"Give me a bowl of wine
—in this I bury
all unkindness"

—SHAKESPEARE



DEAR DOCTOR:

Will Shakespeare was a pretty fair hostler and real estate investor, a pal of Francis Drake and Walter Raleigh, much admired by Queen Elizabeth, and a tophole poet and playwright —but no physician.

Nevertheless, he had a rather good idea of the helpfulness of wine in cases of stress, as you can see above.

Like Will, we wish to recommend a daily bit of wine, with your meals for your own personal stress, Doctor, in your rugged profession.

Also, for your wife's stress at home, we'd like to prescribe a 24-page folder, "WINE COOKERY THE EASY WAY," which will help her to relax in the kitchen (and help you at the barbecue). We'll mail it to you (free) if you'll just drop us a note on your professional letterhead.

By the way, we'll also send you our newly revised 64-page booklet, "USES OF WINE IN MEDICAL PRACTICE," which summarizes a quarter century of scientific research, in America and Europe, as an aid to your profession.

We hope you will request one or both of these free booklets.

As you know, wine stimulates gastric flow; can help the convalescing patient; the patient lacking appetite; can help relieve anxiety; can help patients suffering from the malabsorption syndrome—and helps hospital and geriatric home morale. Shakespeare had a good idea there. And many physicians and hospital administrators are also sharing that idea.

Here's a toast in California wine, Doctor—to your health!

The Winemakers of California

WINE ADVISORY BOARD, 717 MARKET ST., DEPT 1, SAN FRANCISCO, CALIF. 94103

Norinyl® tablets

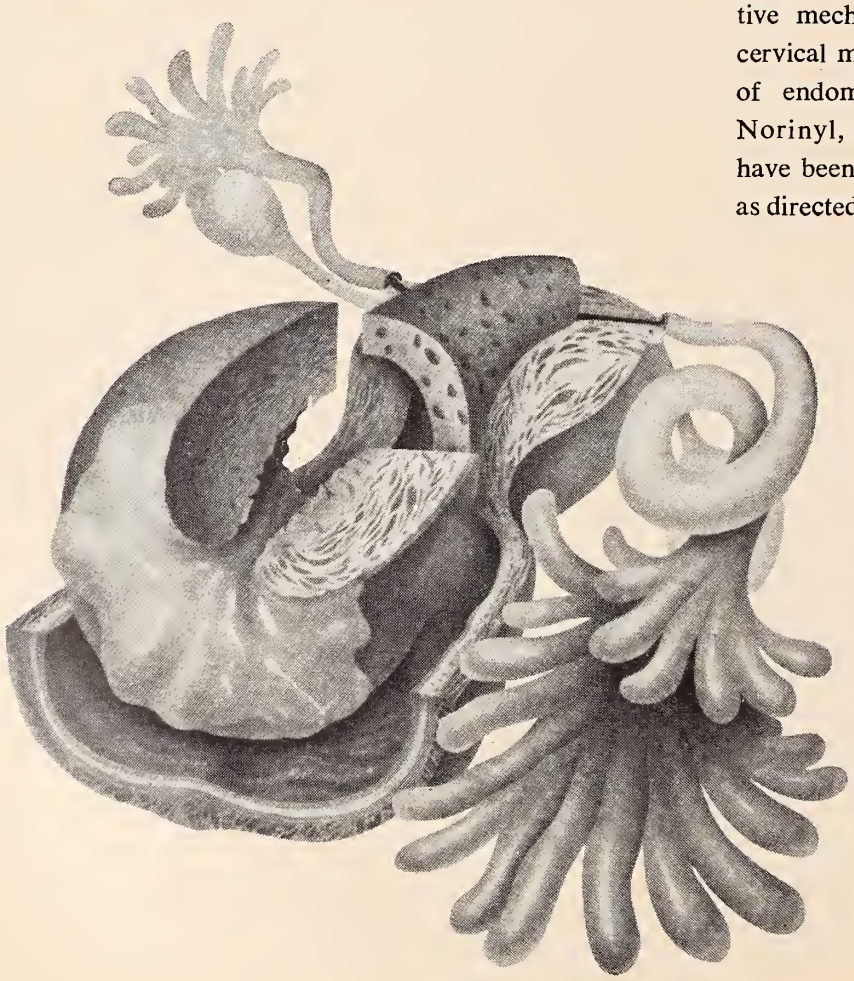
(norethindrone 2 mg. c mestranol 0.1 mg.)

for multiple contraceptive action that has produced a record of unexcelled effectiveness

inhibition of ovulation by means of 2 time-proved hormonal agents

production of a cervical mucus hostile to sperm motility and vitality

creation of an endometrium unreceptive to egg implantation



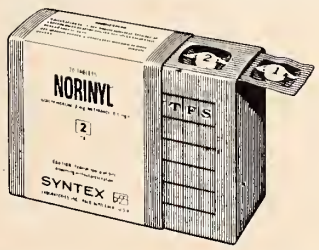
no unplanned pregnancies

Norinyl provides multiple action for maximum assurance of success. It does not depend on ovulation inhibition alone for contraceptive effectiveness. The mechanism of action of combined hormonal therapy results in ovulation inhibition reinforced by other protective mechanisms, including a hostile cervical mucus[1-13] and an acceleration of endometrial changes.[1-3,7-16] With Norinyl, no unplanned pregnancies have been reported to date when used as directed.

plus important supportive benefits that help her through those critical early months of oral contraception

low incidence of side effects
Low incidence of BTB and spotting, nausea and amenorrhea tends to minimize side effect problems and increases patient cooperation.

no confusion about dosage
An unbreakable "confusionproof" package makes it easy to adhere to prescribed dosage schedule: individually sealed tablets numbered from 1 through 20 *plus* monthly calendar record enables patient to double-check dosage intake by day and corresponding tablet number.



Contraindications: Thrombophlebitis or pulmonary embolism (current or past). Existing evidence does not support a causal relationship between use of Norinyl and development of thromboembolism. While a study which was conducted does not resolve definitively the possible etiologic relationship between progestational agents and intravascular clotting, it tends to confirm the findings of the Ad Hoc Advisory Committee appointed by the Food and Drug Administration to review this possibility. Cardiac, renal or hepatic dysfunction. Carcinoma of the breast or genital tract. Patients with a history of psychic depression should be carefully studied and the drug discontinued if depression recurs to marked degree. Patients with a history of cerebral vascular accident.
Warning: Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions, medication should be withdrawn.
Precautions: By May 1963, experience with norethindrone 2 mg.—mestranol 0.1 mg. had extended over 24 months. Through miscalculation, omission or error in taking the recommended dosage of Norinyl, pregnancy may result. If regular menses fail to appear and treatment schedule has not been adhered to, or if patient misses two menstrual periods, possibility of pregnancy should be resolved before resuming Norinyl. If pregnancy is established, Norinyl should be discontinued during period of gestation since virilization of the female fetus has been reported with oral use of progestational agents or estrogen. When lactation is desired, withhold Norinyl until nursing needs are establlshed. Existing uterine fibroids may increase in size. In metabolic or endocrine disorders, careful clinical preevaluation is indicated. A few patients without evidence of hyperthyroidism had elevated serum protein-bound iodine levels, which in the light of present knowledge, does not necessarily imply hyperthyroidism. Protein-bound iodine increased following estrogen administration. Bromsulphalein retention has occurred in up to 25% of patients without evidence of hepatic dysfunction. Studies from 24-hour urine collections have shown an increase in aldosterone and 17-ketosteroids and decrease in 17-hydroxycorticoid levels. Thus, Norinyl should be discontinued prior to and during thyroid, liver or adrenal function tests. Because progestational agents may cause fluid retention, conditions such as epilepsy, migraine and asthma require careful observation. Thus far no deleterious effect on pituitary, ovarian or adrenal function has been noted; however, long-range possible effect on these and other organs must await more prolonged observation. Norinyl should be used with caution in patients with bone, renal or any disease involving calcium or phosphorus metabolism.
Side Effects: Intermenstrual bleeding; amenorrhea; symptoms resembling early pregnancy, such as nausea; breast engorgement or enlargement, chloasma and minor degree of fluid retention (if these should occur and patient has not strictly adhered to medication plan, she should be tested for pregnancy); weight gain; subjective complaints such as headache, dizziness, nervousness, irritability; in a few patients libido was increased. In a total of 3,090 patients, 2.2% discontinued medication because of nausea.
NOTE: See sections on contraindications and precautions for possible side effects on other organ systems.
Dosage and Administration: One Norinyl tablet orally for 20 days, commencing on day 5 through and including day 24 of the menstrual cycle. (Day 1 is the first day of menstrual bleeding.)
Availability: Dispensers of 20 and 60 tablets; bottles of 100.

References: 1. Council on Drugs. JAMA 187:664 (Feb. 29) 1964. 2. Bryans, F. E.: Canad Med Ass J 92:287 (Feb. 6) 1965. 3. Goldzieher, J. W.: Med Clin N Amer 48:529 (Mar.) 1964. 4. Cohen, M. R.: Paper presented at Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965. 5. Hammond, D. O.: Ibid. 6. Rice-Wray, E., Goldzieher, J. W., and Aranda-Rosell, A.: Fertil Steril 14:4D2 (Jul.-Aug.) 1963. 7. Goldzieher, J. W., Moses, L. E., and Ellis, L. T.: JAMA 180:359 (May 5) 1962. 8. Kempers, R. D.: GP 29:88 (Jan.) 1964. 9. Tyler, E. T.: JAMA 187:562 (Feb. 22) 1964. 10. Rudel, H. W., Martinez-Manautou, J., and Maqueo-Topete, M : Fertil Steril 16:158 (Mar.-Apr.) 1965. 11. Flowers, C. E., Jr.: N Carolina Med J 25:139 (Apr.) 1964. 12. Goldzieher, J. W.: Appl Ther 6:503 (June) 1964. 13. The Control of Fertility. Report adopted by the Committee on Human Reproduction of the American Medical Association. JAMA 194:462 (Oct. 25) 1965. 14. Flowers, C. E., Jr.: JAMA 188:1115 (June 29) 1964. 15. Merritt, R. I.: Appl Ther 6:427 (May) 1964. 16. Newland, D. O.: Paper presented at Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965.

norethindrone—an original steroid from
SYNTEX
LABORATORIES INC., PALO ALTO, CALIF

Norinyl® tablets
(norethindrone 2 mg ē mestranol 0.1 mg)

for multiple contraceptive action

MOLECULAR REMODELING—

laboratory exercise or clinical necessity?

More than twenty-five years have passed since the discovery of the diuretic activity of sulfanilamide started pharmacologists on a succession of molecular remodelings to find the ideal diuretic.

Diuresis—a sought-after clinical effect from an unwanted side effect

It started in 1937 when a clinician reported that the administration of a sulfonamide was sometimes accompanied by an unexplainable side effect—metabolic acidosis.[1] Three years later the side effect was explained. The sulfonamide radical of sulfanilamide inhibited carbonic anhydrase,[2] the enzyme responsible for converting carbon dioxide and water to hydrogen ions and bicarbonate ions.

Later, other investigators showed by dog experiments that metabolic acidosis probably resulted when the inhibition of carbonic anhydrase upset the exchange of hydrogen and sodium ions, causing increased excretion of sodium as the bicarbonate.[3]

It was twelve long years after the first report of the unexplainable side effect (metabolic acidosis) that it was finally shown that large doses of sulfanilamide administered to edematous patients were indeed capable of promoting diuresis.[4] However, the possibility of toxic effects from its prolonged use and its relatively weak diuretic action made it impractical for clinical use as a diuretic.[5]

Because the inhibition of carbonic anhydrase seemed to be the key to effective diuresis, investigators began to look for more potent enzyme inhibitors—in the hopes that they would be more effective diuretics.

The most important of these early compounds, acetazolamide, enjoyed several years of fairly wide clinical use.

Its carbonic anhydrase inhibitory activity was several hundred times greater than that of sulfanilamide.[6] The increase in inhibitory activity, however, increased not only the excretion of sodium and bicarbonate ions, but also the excretion of potassium.[7] And, like its predecessor, acetazolamide precipitated mild acidosis. Its prolonged use could result in hypokalemic acidosis.[7]

The 'thiazides'—an answer to the metabolic acidosis caused by carbonic anhydrase inhibition

Despite the fact that the sulfonamide group appeared to be responsible for carbonic anhydrase inhibition which in turn appeared to be responsible for diuresis, investigators began to synthesize compounds with structural alterations to the sulfonamide group.

The first major breakthrough came with the synthesis of chlorothiazide. Altering the sulfonamide group did indeed alter the ability of chlorothiazide to inhibit carbonic anhydrase—it was only 1 10th as potent as acetazolamide in inhibiting the enzyme.[8] Despite the drop in inhibitory potency, however, chlorothiazide proved to be an effective diuretic—an observation that led to the conclusion that its diuretic action was due to some mechanism other than its action on carbonic anhydrase.[9, 10]

For effective diuresis, chlorothiazide was administered in daily dosages ranging from 250 to 2000 mg.[11] It increased the excretion of sodium and chloride; and, to a lesser extent, potassium and bicarbonate.[11] The excretion of potassium appeared to be maximal at higher dose levels at which, theoretically, the carbonic anhydrase inhibitory effect is more active.[11] Its prolonged use, therefore, could sometimes result in metabolic hypokalemic, hypochloremic alkalosis.[7]

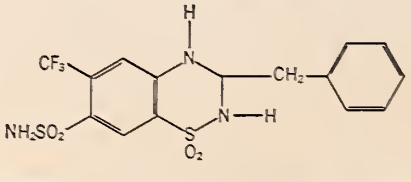
Naturetin—effective diuresis with more favorable electrolyte balance

Other thiazides followed—with improvements being aimed at two particular areas: 1. attempts to increase diuretic action in relation to the milligram potency of the drug, and 2. attempts at a more favorable sodium potassium ratio in the urine, i.e., to decrease the excretion of potassium while maintaining the excretion of sodium.[12]

One of these, Naturetin, Squibb Bendroflumethiazide, has made advances on both these points. "By adding a 3-benzyl radical to hydroflumethiazide a rather dramatic reduction in dose range is accomplished. With this drug, effective sodium excretion is obtained with doses between 2.5 and 10 mg., which is a 200 to 1 ratio as compared to chlorothiazide..."[13]

Moreover, due probably to its virtual lack of carbonic anhydrase inhibition, Naturetin (bendroflumethiazide) has been shown to cause less potassium and bicarbonate loss and less alteration in urinary pH than either chlorothiazide or hydrochlorothiazide.

Naturetin is outstandingly effective not only in establishing, but also in maintaining, excretion of retained fluid in edematous patients. And its duration of action is sufficiently prolonged to allow a single daily administration in most patients. Naturetin is also an effective antihypertensive agent.



Contraindications: Severe renal impairment; previous hypersensitivity.

Warning: Ulcerative small bowel lesions have occurred with potassium-containing thiazide preparations or with enteric-coated potassium salts supplementally. Stop medication if abdominal pain, distension, nausea, vomiting, or G.I. bleeding occur.

Precautions: The dosage of ganglionic blocking agents, veratrum, or hydralazine when used concomitantly must be reduced by at least 50% to avoid orthostatic hypotension. Electrolyte disturbances are possible in cirrhotic or digitalized patients.

Side Effects: Bendroflumethiazide may cause increases in serum uric acid, unmask diabetes, increase glycemia and glycosuria in diabetic patients and may cause hypochloremic alkalosis, hypokalemia; cramps, pruritus, paresthesias, and rashes may occur.

Supplied: Naturetin (Squibb Bendroflumethiazide) 5 mg. and 2.5 mg. tablets. Also available Naturetin c K [Squibb Bendroflumethiazide (5 or 2.5 mg.) with Potassium Chloride (500 mg.)]. For full information, see Product Brief.

References: **1.** Southworth, H.: Proc. Soc. Exper. Biol. & Med. *36*:58, 1937. **2.** Mann, T. and Keilin, D.: Nature *146*:164, 1940. **3.** Pitts, R. F., and Alexander, R. S.: Am. J. Physiol. *144*:239, 1945. **4.** Schwartz, W. B.: New England J. Med. *240*:173, 1949. **5.** Friedberg, C. K., in Moyer, J. H., and Fuchs, M.: Edema Mechanisms and Management, Philadelphia, W. B. Saunders Co., 1960, p. 259. **6.** Cumming, J. R.; Tabachnick, E., and Seelig, M., in Moyer, J. H., and Fuchs, M.: op. cit., p. 254. **7.** Werko, L., in Moyer, J. H., and Fuchs, M., op. cit., p. 188. **8.** Beyer, K. H., Jr., in Moyer, J. H., and Fuchs, M.: op. cit., p. 274. **9.** Maren, T. H., and Wiley, C. E.: J. Pharmacol. & Exper. Therap. *143*:230, 1964. **10.** Earley, L. E., and Orloff, J.: Ann. Rev. Med. *15*:149, 1964. **11.** Fuchs, M., and Mallin, S. R., in Moyer, J. H., and Fuchs, M.: op. cit., p. 276. **12.** Ford, R. V., in Moyer, J. H., and Fuchs, M.: op. cit., p. 290. **13.** cited in Fuchs, M., and Mallin, S. R. (ref. 11): op. cit., p. 283.

Naturetin®
SQUIBB BENDROFLUMETHIAZIDE
to reduce excess fluid
or high blood pressure

ArMA TO SPONSOR STATE-WIDE DIABETES DETECTION DRIVE

November 13 through 19 is National Diabetes Week. This year, as a service to the people of Arizona, your Arizona Medical Association, through its Professional Committee, is sponsoring a state-wide Diabetes Detection Drive to be held during National Diabetes Week. We believe that our Association has a grave responsibility for service to our State in the field of Public Health and, therefore, your Association is planning this extensive state-wide program to discover citizens with undetected diabetes mellitus. Although numerous diabetes detection drives have been successfully conducted in communities on a local basis, never before has an extensive state-wide program such as this been attempted nor has any State Medical Association ever undertaken to sponsor such a drive. This then will be a pilot program and a first for the State of Arizona.

Dr. Marguerite Williams, of Sedona, is the State Diabetes Chairman, and has devoted many hours in the past several months to planning and coordinating this mammoth undertaking.

The drive will be set up on an individual county basis and coordinated through the Subcommittee on General Medicine of the Professional Committee. Nearly all of the fourteen county medical societies have agreed to participate. County Diabetes Chairmen have been appointed by the individual county medical society presidents and it will be the responsibility of each county chairman to direct the drive in his own particular area.

Volunteer help has been obtained from the State Woman's Auxiliary and from various women's clubs in counties where no Auxiliary exists. Detection centers will be established throughout each county in convenient locations during the week of November 13-19. Each center will be staffed by a physician, one or more volunteer registered nurses, volunteer laboratory technicians where available, and numerous lay volunteers.

Each testee will be first interviewed for possible symptoms of diabetes and this information will be recorded on a specially designed IBM card. Dextrostix for blood sugar estimation from capillary blood will be used. While lacking the accuracy of a Somogy-Nelson colorimetric blood sugar determination, this test is adequate for screening purposes and is certainly better than testing for glycosuria. Each test should take no longer than five minutes, including the interview time. No known diabetics will be tested. Testees will be encouraged by a great deal of pre-test publicity in the mass news media to arrange for the test to be done approximately two hours after a relatively high carbohydrate meal. Should the screening test indicate a blood

sugar elevation (i.e., greater than 130 mg. per cent), the testee will be given a card so indicating and will be encouraged to consult his local physician for follow-up. In addition, a report of the result will be forwarded to the personal physician indicated by the person tested in the earlier interview. The local physician will be requested to report back to the Diabetes Committee the results of further diagnostic testing so that this information can be entered on the patient's IBM card for future statistical analysis. No attempt will be made to further work up the patient for diabetes nor will any advice regarding therapy be given. This is properly the responsibility of the local physician.

Those individuals who show a "normal" screening result will be told that there is no evidence of diabetes mellitus at that time. However, if these persons have symptoms compatible with diabetes mellitus, they also will be urged to consult their local physician for further testing. All will be encouraged to have blood sugar determinations at least once a year.

We estimate that, on a state-wide basis, approximately 50,000 tests may be accomplished during the testing period. Naturally, the cost for such a program will be considerable. Therefore, as was done in the polio immunization program in 1962, a donation will be requested from each person tested, but it is to be emphasized that anyone who cannot afford 50c will not be deprived of an examination.

Diabetes detection is receiving more and more attention from the Federal Government and the Public Health Department. If we, as physicians, do not accept the responsibility for this type of testing program, the Government soon will do so. We believe that there is currently enough Government participation in medicine and, therefore, we encourage all physicians in the State of Arizona to participate in this program. If each person volunteers only a few hours of his time, no one will be overworked. If only a few diabetics are discovered through this program, our efforts will certainly have been most worthwhile.

Harold W. Kohl, Jr., M.D., Chairman
Subcommittee on General Medicine
and Aging

TWO APPOINTMENTS AT THE BARROW NEUROLOGICAL INSTITUTE

Doctor Joseph C. White, Jr., has been appointed the Chairman of the Division of Neurology, Barrow Neurological Institute of St. Joseph's Hospital, Phoenix, Arizona. He also will be the Program Director of the Convulsive Disorder Unit at the same institution.

Doctor White received his M.D. degree at Jefferson Medical College in Philadelphia in 1954. After completing his residency in Neurology at Jefferson Medical College, he spent a year as a post-doctoral fellow in Neurophysiology at U.C.L.A. Medical Center in Los Angeles. He returned to Jefferson in 1959 and became an assistant professor in Neurology in 1963.

Doctor Alvin D. Sidell has been appointed Chief of the Electroencephalographic Laboratory in the Division of Neurology of the Barrow Neurological Institute. Doctor Sidell received his M.D. degree at the University of Washington School of Medicine in Seattle in 1954. After completing his residency in Neurology at Chicago Wesley Memorial Hospital, Northwestern University Medical School and Massachusetts Memorial Hospital, Boston University School of Medicine, he served a one-year fellowship in Neurophysiology at the Mayo Clinic and six months as research associate at the Hospital for Sick Children, London, England, and completed a residency in Pediatric Neurology at Johns Hopkins in 1962.



following infection

B and C vitamins are therapy: STRESSCAPS B and C vitamins in therapeutic amounts... help the body mobilize defenses during convalescence... aid response to primary therapy. The patient with a severe infection, and many others undergoing physiologic stress, may benefit from STRESSCAPS capsules.



Stresscaps®

Stress Formula Vitamins Lederle

FOR PROFESSIONAL RECOMMENDATION ONLY

Each capsule contains:

Vitamin B_1 (as Thiamine Mononitrate)	10 mg
Vitamin B_2 (Riboflavin)	10 mg
Vitamin B_6 (Pyridoxine HCl)	2 mg
Vitamin B_{12} Crystalline	4 mcgm
Vitamin C (Ascorbic Acid)	300 mg
Niacinamide	100 mg
Calcium Pantothenate	20 mg

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "remindor" jars of 30 and 100; bottles of 500.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York

Lederle

626-6—3612

block end runs



LOMOTIL® tablets liquid

Each tablet and each 5 cc. of liquid contains:
diphenoxylate hydrochloride 2.5 mg.
(Warning: May be habit forming)
atropine sulfate 0.025 mg.

tackles the problem of diarrhea directly

Effectiveness—Physiologic evidence indicates that Lomotil acts directly on the smooth muscle of the bowel to lower motility and control diarrhea. This action is unsurpassed in promptness and efficiency.

Convenience—Lomotil is available as small, easily carried, virtually tasteless tablets and as a pleasant, fruit-flavored liquid.

Versatility—The therapeutic efficiency, safety and convenience of Lomotil may be used to advantage alone or adjunctively in diarrhea associated with:

- **Functional hypermotility**
- **Irritable bowel**
- **Acute infections**
- **Gastroenteritis and colitis**
- **Malabsorption syndrome**
- **Regional enteritis**
- **Ileostomy**
- **Ulcerative colitis**
- **Food poisoning**
- **Drug therapy**

For correct therapeutic effect
Rx correct therapeutic dosage

Dosage: The recommended initial daily dosages, given in divided doses until diarrhea is controlled, are:

Children: Total Daily Dosage

3-6 mo. . .	½ tsp.* t.i.d. (3 mg.)
6-12 mo. .	½ tsp. q.i.d. (4 mg.)
1-2 yr. . . .	½ tsp. 5 times daily (5 mg.)
2-5 yr. . . .	1 tsp. t.i.d. (6 mg.)
5-8 yr. . . .	1 tsp. q.i.d. (8 mg.)
8-12 yr. . .	1 tsp. 5 times daily (10 mg.)
Adults: . .	2 tsp. 5 times daily (20 mg.) (or 2 tablets q.i.d.)

*Based on 4 cc. per teaspoonful.

Maintenance dosage may be as low as one-fourth the initial daily dosage.

Precautions: Lomotil, brand of diphenoxylate hydrochloride with atropine sulfate, is a Federally exempt narcotic preparation of very low addictive potential. Lomotil should be kept out of reach of children since accidental overdosage may cause severe respiratory depression. Recommended dosages should not be exceeded. Lomotil should be used with caution in patients with impaired liver function and in patients taking addicting drugs or barbiturates. The subtherapeutic amount of atropine is added to discourage deliberate overdosage.

Side Effects: Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness, insomnia, numbness of extremities, headache, blurring of vision, swelling of the gums, euphoria, depression and general malaise.

SEARLE *Research in the Service of Medicine*



UP TO 10-12 HOURS' CLEAR BREATHING ON ONE TABLET

Dimetapp® Extentabs®

(Dimetane® [brompheniramine maleate], 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.)

In sinusitis, colds, or U.R.I., Dimetapp lets congested patients breathe easy again. Each Extentab brings welcome relief all day or all night, usually without drowsiness or overstimulation. Its key to success? The Dimetapp formula—Dimetane (brompheniramine maleate), a potent antihistamine reported in one study to have elicited side effects as few as the placebo,* teamed with decongestants phenylephrine and phenylpropanolamine—in a dependable 10- to 12-hour form.

*Schiller, I. W., and Lowell, F. C.: New England J. Med. 261:478, 1959.

Contraindications: Patients hypersensitive to antihistamines. Not recommended for use during pregnancy.

Precautions: Until the patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension.

Side Effects: Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability, or excitement may be encountered.

Dosage: 1 Extentab morning and evening, or as needed.

Supplied: Bottles of 100 and 500.

Also available: Dimetapp® Elixir for conventional *t.i.d.* or *q.i.d.* dosage. See package insert for further details.

A. H. ROBINS CO., INC.
RICHMOND, VIRGINIA 23220

A·H·ROBINS



The full ¼ grain of phenobarb in the formula

takes the nervous edge off the pain ...helps bring out the best in codeine

Phenaphen® with Codeine

the only leading compound analgesic that calms instead of caffeinates

Each capsule contains:

Phenobarbital (¼ gr.) 16.2 mg.
(Warning: may be habit forming)
Aspirin (2½ gr.) 162.0 mg.
Phenacetin (3 gr.) 194.0 mg.
Hyoscyamine sulfate 0.031 mg.
Codeine phosphate.....¼ gr. (No. 2),
½ gr. (No. 3), 1 gr. (No. 4)
(Warning: may be habit forming)

Contraindications: Hypersensitivity to any ingredient.

Precautions: As with all phenacetin-containing products, avoid excessive or prolonged use.

Side Effects: Side effects are uncommon—nausea, constipation, and drowsiness have been reported.

A-H-ROBINS

A. H. ROBINS CO., INC., Richmond, Va. 23220

Symposium On Blood And Electrolytes

presented by

THE ACADEMY OF MEDICAL SCIENCE OF MARICOPA COUNTY

Friday and Saturday Mornings
9 A.M. to 1 P.M.
November 25 and 26, 1966

Mountain Shadows Resort
Scottsdale, Arizona

A cordial invitation is extended to all physicians to attend the first Symposium sponsored by the Academy. The scientific program will be devoted to discussion of blood and electrolyte problems as they apply to general medicine and the sub-specialties.

Speakers and Topics (partial listing)

Oscar A. Thorup, Jr., M.D. "Blood and Electrolyte Problems — Physiologic Aspects"

Raymond E. Weston, M.D. "Modern Concepts of Parenteral Fluid and Electrolyte Therapy"

David C. H. Sun, M.D. "Electrolyte Disturbances in Liver Disease"

John Alsever, M.D. "Immunologic Aspects of Blood Transfusion"

Byrd S. Leavell, M.D. "Uses and Abuses of Blood Transfusions"

Approved for 9 hours
Category I A.A.G.P. Credit

NO REGISTRATION FEE REQUIRED

Arizona Chapter of The American College of Surgeons

January 20 and 21, 1967

Arizona Inn
Tucson, Arizona

First Annual Clinical Meeting Society For Cryo-Opthalmology

January 8-10, 1967

Dunes Hotel
Las Vegas, Nevada

The clinical aspects of cryo-opthalmology will be stressed, including cataract, glaucoma, retinal detachment and herpetic keratitis.

Participants will include:

Doctors Charles Kelman, Harvey Lincoff, Michael Shea, Helen McPherson, David Sudarsky, Arthur Rinfret, Andrew de Roeth and John Bellows.

For further information, please write John G. Bellows, M.D., 30 N. Michigan Avenue, Chicago, Illinois 60602.

Medical Center X-Ray and Clinical Laboratory

1313 North 2nd Street
Phoenix, Arizona
Phone ALpine 8-3484

DIAGNOSTIC X-RAY

CLINICAL PATHOLOGY — TISSUE PATHOLOGY

ELECTROCARDIOGRAPHY — BASAL METABOLISM

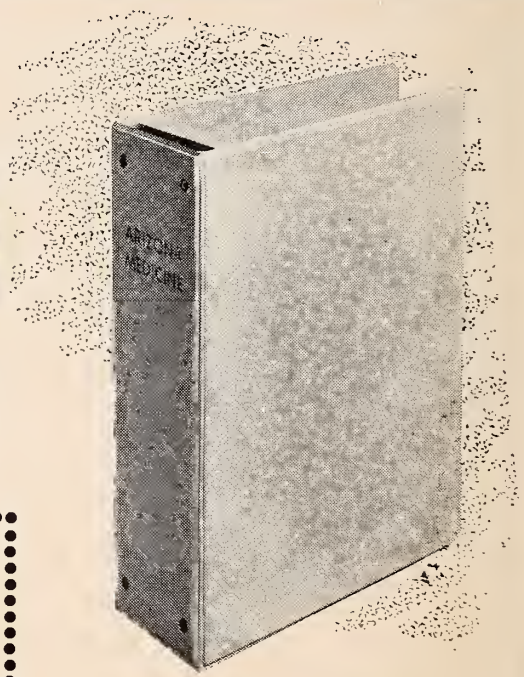
R. Lee Foster, M.D., F.A.C.R., F.A.C.P., Director — *Martin L. List, M.D., Radiologist*

Diplomates of American Board of Radiology

Lorel A. Stapley, M.D., Consultant Pathologist

NOW AVAILABLE

HANDSOME, DURABLE WHITE & GOLD VINYL COVERED BINDERS TO PRESERVE PAST ISSUES OF ARIZONA MEDICINE. EACH BINDER HOLDS UP TO TWELVE ISSUES



Arizona Medicine
4601 N. Scottsdale Rd., Scottsdale, Ariz. 85251

PLEASE SEND _____ BINDERS

Name _____

Address _____

I understand that I will be billed for these.

ORDER YOURS TODAY

ONLY

$3.00 EACH

co–op.er.a.tion, co.op.er.a.tion, co.op.ēr.a.tion (kō–op'er–ā'shen), n. 1. a co–operating; joint effort the benefits of which are shared by all members.

UP TO $1,000 MONTHLY BENEFIT
NOW AVAILABLE
ON A STATEWIDE BASIS - MEANS STABILITY

Disability Insurance pays...not only when you're sick or injured...but also in "peace of mind" when you're well!
"The Only Known Substitute for Earning Power"

NATIONAL CASUALTY COMPANY
OF DETROIT, MICHIGAN

Arizona Representatives

PHOENIX ★ CHARLES A. de LEEUW
3424 NORTH CENTRAL AVENUE
(PHONE 266–2403)

TUCSON ★ RONALD E. DEITRICH
SUITE 9, PIMA PLAZA, 2030 E. BROADWAY
(PHONE 623-7941)

Approved and Recommended by the
MEDICAL ECONOMICS COMMITTEE AND THE COUNCIL
...SINCE 1953

HOBBY HORSE RANCH SCHOOL

A School For Exceptional Children

The Hobby Horse Ranch School is both home and school for a small group of children. It welcomes the child who is mentally retarded and physically handicapped as well as the backward child who suffers no physical handicap.

The Hobby Horse Ranch School is a branch of Fairview School in Fishkill, New York which was established in 1936.

Directors: Blanche C. Lightowler, B.A.
Matthew W. Lightowler

P.O.B. 44, Cortaro, Ariz.

PARAMUS COIN EXCHANGE

The East's Largest Coin Exchange

OFFERS U.S. GOLD FOR YOUR FUTURE
ALL BRILLIANT UNCIRCULATED

$20 Gold pieces		**$3 Gold pieces**	
Liberty	$ 54.95		$349.00
St. Gaudens	$ 54.95	**$2.50 Gold pieces**	
$10 Gold pieces		Liberty	$ 52.95
Liberty	$ 32.95	Indian	$ 32.95
Indian	$ 52.95	**$1 Gold pieces**	
$5 Gold pieces		Type 1	$ 49.95
Liberty	$ 23.95	Type 2	$250.00
Indian	$ 32.95	Type 3	$ 75.00

SETS

Liberty Gold Type Set	4 Coins	$159.95
Indian Gold Type Set	4 Coins	$169.95

ALL COINS IN CUSTOM PLASTIC CASES

U. S. SILVER DOLLARS	Single	$2.00
BRILLIANT	Roll	$39.95
UNCIRCULATED	Bag	$1695.00

Gold and Silver is Today's Best Investment

Paramus Coin Exchange **A.N.A. Member**
Bergen Mall Shopping Center
Paramus, N.J. 07652 **201-342,2600**

Gentlemen: Please ship the following:

NAME
ADDRESS
CITY STATE
BILL MY D.C. ACCT. #.....
BILL MY AMER. EXP. ACCT. #.....
For other coin values send for free catalogue!

Physicians' Directory

ArMA

DIRECTORY AND CLASSIFIED RATES

- *Professional card and classified space is available at $3.50 for the first fifty words or less; 5c for each additional word thereafter.*

- *Mail copy to Business Manager, ARIZona MEDICINE, Post Office Box 128, Scottsdale, Arizona 85252, not later than the tenth of the month preceding publication.*

ALLERGY

JOHN F. McKENNA, M.D.
Associate Fellow, American College of Allergists

PARK CENTRAL NORTH
Medical Building
555 West Catalina
Phoenix, Arizona 85013
Phone 264-1381

DANIEL H. GOODMAN, M.D., F.A.C.P.
Diplomate

American Board of Internal Medicine
and Subspecialty Board of Allegry

31 W. Camelback Road
Phoenix
277-3337

500 W. 10th Place
Mesa
969-3966

HOWARD M. PURCELL, JR., M.D.
JAMES A. SMIDT, M.D.

ALLERGY OF CHILDREN

American Board of Pediatrics
American College of Allergists

322 W. McDowell Rd. PHOENIX, ARIZONA
AL 2-9731

ROBERT HEALY STEVENS, M.D.

Fellow American College Chest Physicians
Allergy and Internal Medicine

The Medical Center
1313 N. 2nd Street
Phoenix 4, Arizona

CARDIOLOGY

George W. Bascom, M.D., F.A.C.C., F.A.C.P.

Diplomate of American Board
of Internal Medicine

Practice Limited to Cardiology

Professional Building
Sierra Vista, Arizona 85635

DERMATOLOGY

GEORGE K. ROGERS, M.D.

DERMATOLOGY
Diplomate of American Board of
Dermatology and Syphilology

Phone ALpine 3-5264
105 W. McDowell Road Phoenix, Arizona

ONCOLOGY

JAMES M. OVENS, M.D.
F.A.C.S. F.I.C.S.

Diplomate American Board of Surgery
Cancer and Tumor Surgery
X-ray and Radium Therapy

333 W. Thomas Road Phone 279-7301
Phoenix 13, Arizona

ORTHOPEDIC SURGERY

THE ORTHOPEDIC CLINIC
ORTHOPEDIC SURGERY

W. A. Bishop, Jr., M.D., F.A.C.S.* — A. L. Swenson, M.D. F.A.C.S.* — Ray Fife, M.D., F.A.C.S.* — Sidney L. Stovall, M.D. F.A.C.S.* — Thomas H. Taber, Jr., M.D., F.A.C.S.*

Robert A. Johnson, M.D.* — Paul E. Palmer, M.D.*

*Diplomates of the American Board of Orthopedic Surgery

2620 N. 3rd Street — Phoenix, Arizona — CR 7-6211

Physicians' Directory

PATHOLOGY

LOUIS HIRSCH, M.D.
RALPH H. FULLER, M.D.
WILLIAM M. HINDMAN, M.D.
EDWARD A. BRUCKER, M.D.
ARTHUR D. SILVER, M.D.

Diplomates American Board of Pathology
Clinical Pathology — Pathologic Anatomy
1601 N. Tucson Blvd.
Tucson, Arizona

PSYCHIATRY

LEO RUBINOW, M.D.
PSYCHIATRY
AM 6-0630
224 E. Thomas Rd. Phoenix, Arizona

RADIOLOGY

R. LEE FOSTER, M.D., F.A.C.R., F.A.C.P.
MARTIN L. LIST, M.D., Radiologist
Diplomates of American Board of Radiology
Diagnostic Roentgenology
1313 N. Second St.
Phone ALpine 8-3484
Phoenix, Arizona

MARCY L. SUSSMAN, M.D., F.A.C.R.
Diplomate of American Board of Radiology
DIAGNOSTIC RADIOLOGY
THERAPEUTIC RADIOLOGY
RADIOISOTOPES
1130 E. McDowell Rd.
Phoenix, Arizona
ALpine 8-1601
540 Wells Fargo
Scottsdale, Arizona
WHitney 5-3959

JOHN W. KENNEDY, M.D.
F. S. TOLONE, M.D.
W. T. COOK, M.D.
Radiology, Diagnosis, X-ray and Cobalt Therapy
4550 N. 51st Avenue
Phoenix, Arizona 85031

SURGERY

Ernest D. Geever, M.D.
General Surgery — General Practice
1003 Division
Prescott, Arizona
445-1322

Pharmacy Directory

Fairmont Pharmacy
3231 East McDowell Road Phoenix, Arizona
PRESCRIPTIONS — DRUGS — COSMETICS — FOUNTAIN
BRidge 5-5719 FREE DELIVERY

In Scottsdale call
Lute's Scottsdale Pharmacy
For
PRESCRIPTIONS
WH 5-8420 — WH 5-8429
Next to the 1st National Bank



Pharmacy Directory

Serving Arizona
Health Needs
Since 1908

Ryan-Evans
DRUG STORES

Phoenix - Tucson - Scottsdale - Mesa - Tempe
Maryvale - Glendale - Westown - Sunnyslope
Paradise Hills - Carefree - Apache Junction
Globe - Miami - Casa Grande - Wickenburg

Classified

DOCTOR'S CENTRAL DIRECTORY

Helen M. Barrasso, R. N., Director
For Emergencies or in Absence of Your Doctor

CALL EA 7-7471

At Your Service 24 Hours Daily

2807 East Speedway Tucson, Arizona

"Established 1932"

DANNY T. SEIVERT INSURANCE

Malpractice & Non-Cancelable Disability with Guaranteed Rates

Professional Programs for Professional Men

Del Webb's TowneHouse — Suite 1700
100 W. Clarendon — Phoenix
Telephone 277-1487

Classified

Private practice available for Board certified or Board eligible Internist at Cottonwood, Arizona. New hospital facilities available, plus office space. Estimated income of approximately $30,000 for first year. Any other necessary information please contact Roland W. Wilpitz, Administrator, Marcus J. Lawrence Memorial Hospital, P. O. Box 548, Cottonwood, Arizona 86326.

ATTENTION: Immediate opening for physician interested in Group General Practice in Arizona. New clinic and hospital facilities. No investment or equipment necessary. Industrial connection allows immediate salary. Will accept draft eligible physician. Reply: Drawer M, Miami, Arizona.

Situation Wanted: Board Certified General Surgeon desires to re-locate in Arizona; licensed in Arizona; married with family; no objection to limited GP; available for personal interview for mutual evaluation. Reply: Box 64-3, 4601 N. Scottsdale Road, Suite 201, Scottsdale, Arizona 85251.

For lease or purchase: Pitney Bowes Model 3300 Folding and inserting machine in good condition. Has been maintained on regular servce contract. Present lease can be continued at $31.00 per month. May be seen at 550 N. Country Club Drive, Mesa, Arizona, Suite 1. Telephone: 969-3511.

ATTENTION INVESTORS! I will contribute my high equity in two commercial acres in North Phoenix, suitable 100 bed Nursing Home, near hospital, stores, bus. Major financing believed available. Or sell outright, or ground lease. Let's talk. J. T. Coffee, Jr. Owner-Realtor. P. O. Box 16152, Phoenix. (602) 264-0667.

Arizona Medicine

JOURNAL OF ARIZONA MEDICAL ASSOCIATION
MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO

U.C. MEDICAL CENTER LIBRARY
DEC 21 1966
San Francisco 22,

December 1966
Vol. 23, No. 12

INDEX ISSUE

FEATURES:

HIDDEN HEMORRHAGE: AN UNCOMMON COMPLICATION OF A COMMON OPERATION 919
Arthur R. Nelson, M.D.
Lee B. Brown, M.D.

NURSING WAITS 927
Bette Clemons, R.N.

SUNDAY NIGHT 943
William B. McGrath, M.D.



some allergens are red...



whatever their color, shape, or size...

Benadryl®

(diphenhydramine hydrochloride)

PARKE-DAVIS

for control of allergic symptoms

Whether the allergen is red and round, or unseen and unknown, BENADRYL provides relief of symptomatic distress through its antihistaminic and antispasmodic actions. *PRECAUTIONS:* Persons who have become drowsy on this or other antihistamine-containing drugs, or whose tolerance is not known, should not drive vehicles or engage in other activities requiring keen response while using this product. Hypnotics, sedatives, or tranquilizers if used with BENADRYL should be prescribed with caution because of possible additive effect. Diphenhydramine has an atropine-like action which should be considered when prescribing BENADRYL. *SIDE EFFECTS:* Side reactions, commonly associated with antihistaminic therapy and generally mild, may affect the nervous, gastrointestinal, and cardiovascular systems. Most frequent reactions are drowsiness, dizziness, dryness of the mouth, nausea, and nervousness. BENADRYL is available in Kapseals® of 50 mg. and Capsules of 25 mg. 00666

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

1866 1966 100th ANNIVERSARY

to help restore and stabilize the intestinal flora

LACTINEX®

TABLETS & GRANULES

for fever blisters and canker sores of herpetic origin

LACTINEX contains a standardized viable mixed culture of *Lactobacillus acidophilus* and *L. bulgaricus* with the naturally occurring metabolic products produced by these organisms.

LACTINEX was introduced to help restore the flora of the intestinal tract in infants and adults.[1,2,3,4]

LACTINEX has also been shown to be useful in the treatment of fever blisters and canker sores of herpetic origin.[5,6,7,8]

No untoward side effects have been reported to date.

Literature on indications and dosage available on request.

HYNSON, WESTCOTT & DUNNING, INC.

HW&D (LX03) BALTIMORE, MARYLAND 21201

ferences: (1) Siver, R. H.: CMD, *21*:109, September 54. (2) Frykman, H. H.: Minn. Med., *38*:19-27, nuary 1955. (3) McGivney, J.: Tex. State Jour. Med., :16-18, January 1955. (4) Quehl, T. M.: Jour. of orida Acad. Gen. Prac., *15*:15-16, October 1965. (5) eekes, D. J.: N.Y. State Jour. Med., *58*:2672-2673, August 1958. (6) Weekes, D. J.: EENT Digest, *25*:47-59, December 1963. (7) Abbott, P. L.: Jour. Oral Surg., Anes., & Hosp. Dental Serv., 310-312, July 1961. (8) Rapoport, L. and Levine, W. I.: Oral Surg., Oral Med. & Oral Path., *20*:591-593, November 1965.

LX

When the stagnant sinus must be drained...



Transillumination of the sinuses – diffuse shadow on right side of face indicates unilateral maxillary sinusitis.

In the common cold, Neo-Synephrine is unsurpassed for reducing nasal turgescence. It stops the stuffy feeling at once. It opens sinus ostia to re-establish drainage and lessen the chance of sinusitis. With Neo-Synephrine, in the concentrations most commonly used, decongestion lasts long enough for extended breathing comfort, without endangering delicate respiratory tissue. Systemic side effects are virtually unknown. There is little rebound tendency.

Winthrop Laboratories, New York, N.Y. 10016 Winthrop

Neo-Synephrine® HCl

Brand of phenylephrine hydrochloride

is available in a variety of forms, for all ages:

- 1/8% solution for infants
- 1/4% solution for children and adults
- 1/4% pediatric nasal spray for children
- 1/2% solution for adults
- 1/2% nasal spray for adults
- 1/2% jelly for children and adults
- 1% solution for adults (resistant cases)

Also NTZ® Solution or Spray
Antihistamine-decongestant

Arizona Medicine

JOURNAL OF ARIZONA MEDICAL ASSOCIATION
MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO

December 1966
Vol. 23, No. 12

INDEX ISSUE

Table of Contents

EDITOR'S PAGE

THE HOLIDAY SPIRIT 907
Roland F. Schoen, M.D.

ORIGINAL ARTICLES

HIDDEN HEMORRHAGE: AN UNCOMMON COMPLICATION OF A COMMON OPERATION 919
Arthur R. Nelson, M.D.
Lee B. Brown, M.D.

THE CHANGING FACE OF HEALTH CARE — PHYSICIANS, HOSPITALS AND GRADUATE EDUCATION 922
Eric G. Ramsay, M.B.

NURSING WAITS: ". . . between things ended and things begun." 927
Bette Clemons, R.N.

PRESIDENT'S PAGE 933
Paul B. Jarrett, M.D.

DEAN'S PAGE

ADMISSION TO MEDICAL SCHOOL 935
Merlin K. DuVal, Jr., M.D.

EDITORIALS

PRINCIPLES OF MEDICAL ETHICS 941
Roland F. Schoen, M.D.

SUNDAY NIGHT 943
William B. McGrath, M.D.

CORRESPONDENCE 949

TOPICS OF CURRENT MEDICAL INTEREST

SENATE BILL 275 AND MEDICARE 953
ArMA GRANTS SEVEN SCHOLARSHIPS 954
YUMA HEALTH OFFICIALS TO OPERATE PROGRAM FOR MEDICALLY INDIGENT 955
TEST YOUR MEDICAL ETHICS I.Q. 956

FEDERAL MEDICAL PROGRAMS

EXPANSION OF THE DEPENDENTS' MEDICAL CARE PROGRAM 959

SQUAW PEAK SKETCHES 965

FUTURE MEDICAL MEETINGS 973

DIRECTORY

OFFICERS AND COMMITTEES 812
MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO 912
SOCIEDAD MEDICA DE ESTADOS UNIDOS DE NORTE AMERICA Y MEXICO ..912
WOMAN'S AUXILIARY 912
INDEX TO ADVERTISERS 984
INDEX TO VOLUME 23 985

Published monthly by The Arizona Medical Association, Inc., with offices at 4601 N. Scottsdale Rd., Suite 201, Scottsdale, Arizona 85251. Subscription $5 a year, single copy 50 cents. Second class postage paid at Scottsdale, Arizona, and at additional mailing offices.

"A DRAMATIC INCREASE IN *SALMONELLOSIS* HAS BEEN OBSERVE

SALMONELLA CARRIERS "PRESENT A FORMIDABLE FIFTH COLUMN."[2]

Furoxone exerts "outstanding activity against Salmonella sp."[3] and "has enhanced the physicians' armamentarium in that it now affords a relatively effective, safe bactericidal agent, which may be used to treat the active disease as well as the carrier state".[2]

SALMONELLA SPECIFIC FUROXONE®

FURAZOLIDONE LIQUID/TABLETS

Often succeeds where others fail in a wide variety of bacterial diarrheas. Specifically within the broad bactericidal range of Furoxone:

Salmonella paratyphi	Salmonella montevideo
Salmonella schottmülleri	Salmonella newport
Salmonella typhimurium	Salmonella anatum
Salmonella choleraesuis	Salmonella derby
Salmonella enteritidis	

Proper antibacterial therapy for individual cases should help in reducing the total number of cases in an epidemic situation.

Side effects are infrequent. A few hypersensitivity reactions to Furoxone have been reported including a fall in blood pressure, urticaria, fever, arthralgia and a vesicular or morbilliform rash. These reactions subsided promptly following withdrawal of the drug. Primaquine-sensitive patients may develop a mild reversible hemolytic anemia. Nausea, emesis, headache or malaise may occur occasionally. To obviate alcohol-disulfiram type reactions, advise against use of alcohol-containing drugs during therapy and four days thereafter.

Do not give to infants under one month of age.

Composition: Furoxone Liquid contains, per 15 cc. tablespoonful, furazolidone 50 mg., pectin 225 mg., and kaolin 3.0 Gm. Furoxone Tablets each contain 100 mg. of furazolidone.

References: 1. Editorial: J.A.M.A. *189*:691 (Aug. 31) 1964. 2. Foertsch, J. H.: J. Oklahoma Med. Assn. *57*:449 (Oct.) 1964. 3. Paul, H. E., and Paul, M. F.: The Nitrofurans—Chemotherapeutic Properties, in Schnitzer, R. J., and Hawking, F. (Eds.) Experimental Chemotherapy, Vol. 2, New York, Academic Press, 1964.

Originators and Developers of The Nitrofurans
EATON LABORATORIES
Division of The Norwich Pharmacal Company
NORWICH, NEW YORK

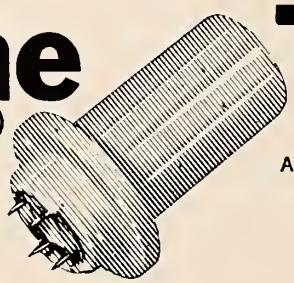
what time is it?

For the past
two years
there's been
one new case
of active tuberculosis
reported for every
four thousand
of U.S. population.

it's time to tine.

Tuberculin, Tine Test

(Rosenthal) Lederle



Available in 5's and 25's.
Order now
from your pharmacist
or your Lederle
representative.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York

Lederle

414-6—4046R



ARIZONA MEDICINE

Roland F. Schoen, M.D. Editor
Mr. Bruce E. Robinson Managing Editor
Mrs. Evelyn Kuebler Editorial Assistant

ASSISTANT EDITORS
Original Articles

Mayer Hyman, M.D. — Preston J. Taylor, M.D.
Kenneth Johnson, M.D. — Robert F. Lorenzen, M.D.

Editorial Section

R. Lee Foster, M.D. — William B. McGrath, M.D.
John R. Green, M.D. — Leslie B. Smith, M.D.
John W. Kennedy, M.D.

ASSOCIATE EDITORS

Earl J. Baker, M.D. Civil Defense
Max Baumeister, Jr., M.D. Anesthesiology
Chester G. Bennett, M.D. General Surgery
William E. Crisp, Jr., M.D. Obstetrics and Gynecology
Philip E. Dew, M.D. Pediatrics
Charles W. Elkins, M.D. Neurosurgery
Eugene Leibsohn, M.D. Dermatology
James D. Nauman, M.D. ..Medical Society of U.S. & Mexico
William M. Hindman, M.D. Pathology
C. Thomas Read, M.D. Thoracic Surgery
Wallace A. Reed, M.D. Medical Economics
Paul L. Singer, M.D. Genito-Urinary
George A. Spendlove, M.D. Public Health
Alvin L. Swenson, M.D. Orthopedics
William G. Ure, M.D. Tuberculosis

Editorials of Arizona Medicine are the opinions of the authors and do not necessarily represent the official stand of The Arizona Medical Association, Inc. The opinions of the Board of Directors may be sought in the published proceedings of that body.

Address all correspondence to the
Journal Offices
4601 N. Scottsdale Rd., Scottsdale, Ariz. 85251

Bruce E. Robinson
Business Manager

National Representative
State Journals West
Melvin B. Tyler, Advertising Manager
693 Sutter Street
San Francisco, California 94102

"The material in this journal is not copyrighted. We ask that anyone using material from it note the previous publication in ARIZONA MEDICINE."

CONTRIBUTIONS

The Editor sincerely solicits contributions of scientific articles for publication in ARIZONA MEDICINE. All such contributions are greatly appreciated. All will be given equal consideration.

Material submitted for publication in ARIZONA MEDICINE should conform to the following policies:

1. Manuscripts, including references or bibliography, should be typewritten, double-spaced, on one side of the paper only, and the original and a carbon enclosed.
2. Be guided by the general rules of medical writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.
3. Althougb the Editors try to catch inaccuracies, the ultimate responsibility is the author's.
4. Articles are accepted for publication only if they are contributed exclusively to this Journal. Ordinarily, contributors will be notified within 60 days if a manuscript is accepted for publication. Every effort will be made to return unused manuscripts.
5. The Journal reserves the right to edit all material.
6. Reprints will be supplied to the author at printing cost.

The HOLIDAY SPIRIT

This is traditionally a time for good fellowship and high spirits; a time for a backward glance and a pat on the back for all the "advances" and "hasn't this been a wonderful year!" The Holiday Spirit!

I suppose we can say 1966 was a good year. We still retain our individual medical practices, although they do seem to be somewhat regulated. We still have our annual bout with IRS to look forward to, and I imagine that some of the current problems of Federal control, inflation, rising costs and current political situations will be reflected upon the decisions of The Arizona Medical Association in 1967.

Physicians are prone to "forget" their problem cases, although they rarely fail to benefit from these experiences. We should have had quite an education in 1966. We are 75 years old. We have a continuing responsibility to ourselves and to our patients. We communicate better. We have been forced to unite in spite of ourselves in some common causes. We need to continue the leadership that was initiated in 1966.

Traditionally also, we are allowed one Christmas wish. I have but one personal wish — "that in 1967 we continue to THINK — and THINK — and THINK."

Now have the courage of your convictions.

A Very Merry Christmas and a Very
Happy New Year.

Roland F. Schoen, M.D.
Editor

New
low-cost tetracycline/antifungal therapy

for broad-spectrum activity
plus specific antifungal prophylaxis
at significant patient savings

Whenever tetracycline is indicated in these candidates for Candida:

1. diabetic patients



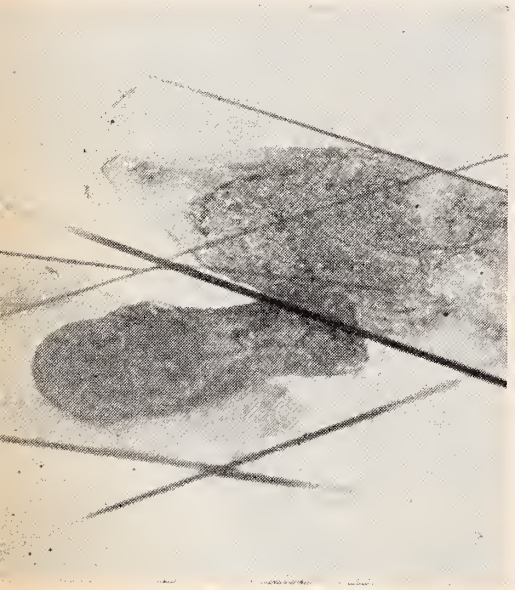
2. nonpregnant women with a history of recent or recurrent monilial vaginitis



3. elderly or debilitated patients



4. patients with a past history of moniliasis



5. patients on long-term tetracycline or corticosteroid therapy



BRISTOL THERAPEUTIC SUMMARY: For complete in formation consult Official Package Circular. *Indications* Infections of respiratory, gastrointestinal and genitourinar tracts and skin and soft tissues due to tetracycline-sen tive organisms, in patients with increased susceptibili to monilial infections. *Contraindications:* The drug is co traindicated in patients hypersensitive to its component *Warnings:* Photodynamic reactions have been produced b tetracyclines. Natural and artificial sunlight should b avoided during therapy. Stop treatment if skin discomfo occurs. With renal impairment, systemic accumulation an hepatotoxicity may occur. In this situation, lower dos should be used. Tooth staining and enamel hypoplasia ma be induced during tooth development (last trimester o pregnancy, neonatal period and childhood). *Precaution* Bacterial superinfection may occur. Infants may develo increased intracranial pressure with bulging fontanels. D gonorrheal therapy, serologic tests for syphilis should b conducted initially and monthly for 3 months. *Adver Reactions:* Glossitis, stomatitis, nausea, diarrhea, flat lence, proctitis, vaginitis, dermatitis, and allergic reactio may occur. *Usual Adult Dosage:* 1 capsule *q.i.d.* Continu therapy for 10 days in beta-hemolytic streptococcal infe tions. Administer one hour before or 2 hours after meal *Supply:* Capsules, bottles of 16. Each capsule contains te racycline phosphate complex equivalent to 250 mg. tetr cycline HCl activity and 250,000 units of nystatin.

BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York

Tetrex-F®

Each capsule contains tetracycline phosphate complex equivalent to tetracycline hydrochloride 250 mg. and nystatin 250,000 units

Tetrex-F is priced lower than most tetracycline-antifungal products.



UP TO 10–12 HOURS' CLEAR BREATHING ON ONE TABLET

Dimetapp® Extentabs®

(Dimetane® [brompheniramine maleate], 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.)

In sinusitis, colds, or U.R.I., Dimetapp lets congested patients breathe easy again. Each Extentab brings welcome relief all day or all night, usually without drowsiness or overstimulation. Its key to success? The Dimetapp formula—Dimetane (brompheniramine maleate), a potent antihistamine reported in one study to have elicited side effects as few as the placebo,* teamed with decongestants phenylephrine and phenylpropanolamine—in a dependable 10- to 12-hour form.

*Schiller, I. W., and Lowell, F. C.: New England J. Med. 261:478, 1959.

Contraindications: Patients hypersensitive to antihistamines. Not recommended for use during pregnancy.

Precautions: Until the patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension.

Side Effects: Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability, or excitement may be encountered.

Dosage: 1 Extentab morning and evening, or as needed.

Supplied: Bottles of 100 and 500.

Also available: Dimetapp® Elixir for conventional *t.i.d.* or *q.i.d.* dosage. See package insert for further details.

A. H. ROBINS CO., INC.
RICHMOND, VIRGINIA 23220

A·H·ROBINS



Phenaphen® with Codeine

the only leading compound analgesic that calms instead of caffeinates

Each capsule contains:

Phenobarbital (¼ gr.)	16.2 mg.
(Warning: may be habit forming)	
Aspirin (2½ gr.)	162.0 mg.
Phenacetin (3 gr.)	194.0 mg.
Hyoscyamine sulfate	0.031 mg.
Codeine phosphate	¼ gr. (No. 2), ½ gr. (No. 3), 1 gr. (No. 4)
(Warning: may be habit forming)	

Contraindications: Hypersensitivity to any ingredient.

Precautions: As with all phenacetin-containing products, avoid excessive or prolonged use.

Side Effects: Side effects are uncommon—nausea, constipation, and drowsiness have been reported.

A-H-ROBINS

A. H. ROBINS CO., INC., Richmond, Va. 23220

"son pouvoir antiémétique est élevé"*

Vomiting:
In Geneva they have a word for it

In Geneva, too, Dramamine is a familiar word. Like physicians the world over, they know that 'its antiemetic potency* is high" ("son pouvoir antiémétique est élevé").

Nausea and vomiting caused by infection or simple functional gastrointestinal disturbances are quickly controlled by this classic antinauseant.

Usual Adult Dosage: One or two tablets every four hours as needed.

Precautions: Dramamine, notably nontoxic itself, may mask the symptoms of streptomycin toxicity. Patients should be cautioned against operating automobiles or dangerous machinery because of possible drowsiness.

*Neyroud, M.: Praxis 44:648-650 (July 14) 1955.

Research in the Service of Medicine SEARLE

relied on round the world ■

Dramamine®

brand of

dimenhydrinate

classic antinauseant

Ampuls (for intramuscular or intravenous use)
Supposicones® / Liquid / Tablets

DIRECTORY

THE ARIZONA MEDICAL ASSOCIATION, INC., Organized 1892, 4601 N. Scottsdale Road, Scottsdale, Arizona 85251.

OFFICERS AND DIRECTORS – 1966-67

President—Paul B. Jarrett, M.D. 2021 N. Central Ave., Phoenix, Arizona
President-Elect—Arnold H. Dysterheft, M.D. McNary Hospital, McNary, Arizona
Vice President—Arthur V. Dudley, Jr., M.D. Bldg. 23, Med. Sq., 1601 N. Tucson Blvd., Tucson, Arizona
Secretary—Charles E. Henderson, M.D. 909 East Brill Street, Phoenix, Arizona
Treasurer—Fred H. Landeen, M.D. 2222 North Craycroft Rd., Tucson, Arizona
Speaker of the House—Walter Brazie, M.D. P. O. Box 631, Kingman, Arizona
Editor-in-Chief—Roland F. Schoen, M.D. 1023 E. Florence Blvd., Casa Grande, Arizona
Delegate to AMA—Dermont W. Melick, M.D. 909 East Brill Street, Phoenix, Arizona
Delegate to AMA—William B. Steen, M.D. 116 North Tucson Boulevard, Tucson, Arizona
Alternate Delegate to AMA—Daniel T. Cloud, M.D. 2021 North Central Ave., Phoenix, Arizona
Alternate Delegate to AMA—Philip G. Derickson, M.D. 744 N. Country Club Rd., Tucson, Arizona

DISTRICT DIRECTORS

Central District—Jack E. Brooks, M.D. 2021 N. Central Ave., Phoenix, Arizona
Central District—Richard O. Flynn, M.D. 2210 S. Mill Ave., Tempe, Arizona
Central District—W. Shaw McDaniel, M.D. 461 W. Catalina Dr., Phoenix, Arizona
Central District—Robert A. Price, M.D. 3602 N. 15th Ave., Phoenix, Arizona
Central District—Noel G. Smith, M.D. 3614 N. 15th Ave., Phoenix, Arizona
Northeastern District—Harry S. Beckwith, M.D. East 2nd & Colorado Ave., Winslow, Arizona
Northwestern District—Hugh E. Dierker, M.D. 505 North Beaver Street, Flagstaff, Arizona
Southeastern District—Deward G. Moody, M.D. Stage Building, Nogales, Arizona
Southern District—Warren D. Eddy, M.D. 601 N. Wilmot Road, Tucson, Arizona
Southern District—Richard L. Dexter, M.D. 116 N. Tucson Boulevard, Tucson, Arizona
Southern District—Hermann S. Rhu, Jr., M.D. 5th & Alvernon Way, Tucson, Arizona
Southwestern District—Howard W. Finke, M.D. Magma Hospital, Superior, Arizona

SOCIEDAD MEDICA DE ESTADO UNIDOS DE NORTE AMERICA Y MEXICO

President.—Alfonso Topete Duran, M.D., Professor of Surgery Edificio Profesional, Guadalajara, Jalisco, Mexico
President-Elect—James Nauman, M.D. 1603 N. Tucson Blvd., Tucson, Arizona
Vice President—Eduardo Gonzalez Murguia, M.D. Prisciliano Sanchez—1081 Guadalajara, Jalisco, Mexico
Secretary for the United States—Robert A. Witzeman, M.D. 222 West Osborn Road, Phoenix, Arizona 85013
Secretary for Mexico—Felix Michel Alatorre, M.D. Munguia—316, Guadalajara, Jalisco, Mexico
Treasurer for the United States—Lucy A. Vernetti, M.D. 333 West Thomas Road, Phoenix, Arizona 85013
Treasurer for Mexico—Jorge E. Riggen Davila, M.D. Parroguia 138, Guadalajara, Jalisco, Mexico
Exec. Secretary for the United States—Mrs. Virginia E. Bryant 333 West Thomas Road #207, Phoenix, Arizona 85013
Executive Secretary for Mexico—Mr. Alfredo Patron Venus #51 Sur, Mazatlan, Sinaola, Mexico

COMMITTEES – 1966-67

NOTE: The President, President-elect and Secretary are ex-officio members of all Committees unless otherwise specified.

ARTICLES OF INCORPORATION & BY-LAWS COMMITTEE: Walter Brazie, M.D., Chairman (Kingman)

BENEVOLENT & LOAN FUND COMMITTEE: Daniel T. Cloud, Jr., M.D., Chairman (Phoenix)

CENTRAL OFFICE ADVISORY COMMITTEE: Charles E. Henderson, M.D., Chairman (Phoenix)

GRIEVANCE COMMITTEE: William B. Steen, M.D., Chairman (Tucson)

HISTORY & OBITUARIES COMMITTEE: Robert S. Flinn, M.D., Chairman (Phoenix)

INDUSTRIAL RELATIONS COMMITTEE: Derald G. May, M.D., Chairman (Phoenix)

LEGISLATIVE COMMITTEE: Carlos S. Craig, M.D., Chairman (Phoenix)

MEDICAL ECONOMICS COMMITTEE: Ian M. Chesser, M.D., Chairman (Tucson)

PROCUREMENT & ASSIGNMENT COMMITTEE: Joseph M. Greer, M.D., Chairman (Phoenix)

PROFESSIONAL COMMITTEE: William G. Payne, M.D., Chairman (Tempe)

PUBLIC RELATIONS COMMITTEE: Arthur V. Dudley, Jr., M.D., Chairman (Tucson)

PUBLISHING COMMITTEE: Roland F. Schoen, M.D., Chairman (Casa Grande)

SCIENTIFIC ASSEMBLY COMMITTEE: Edward Sattenspiel, M.D., Chairman (Phoenix)

COUNTY MEDICAL SOCIETY OFFICERS, 1966

APACHE: W. Duncan Spining, M.D., President, Sage Memorial Hospital, Ganado; Ellis W. List, Jr., M.D., Secretary, McNary Hospital, McNary.

COCHISE: Raymond Grossman, M. D., President, Drawer 1059, Douglas 85607; Jorge Gaytan, M.D., Secretary, Drawer S. Douglas.

COCONINO: Hugh E. Dierker, M.D., President, 505 N. Beaver Street, Flagstaff; R. T. McDonald, M.D., Secretary, 713 N. Beaver Street, Flagstaff.

GILA: David B. Gilbert, M.D., President, Physicians & Surgeons Clinic, Payson; Alford D. Musgrave, Jr., M.D., Secretay, 703 Ash Street, Globe.

GRAHAM: John H. Walker, M.D., President, 702 8th Avenue, Safford.

GREENLEE: Gerhard L. Ihm, M.D., President, Phelps Dodge Hospital, Morenci; James W. Gilbert, M.D., Secretary, P. O. Box 1537, Clifton.

MARICOPA: Ray Fife, M.D., President, 2620 N. 3rd Street, Phoenix; Charles H. Finney, M.D., Secretary, 555 W. Catalina Dr., Phoenix.
(Society Office – 2025 North Central Avenue Phoenix)

MOHAVE: John G. Lingenfelter, M.D., President, 412 E. Oak Street, Kingman; John J. Standifer, M.D., Secretary, 412 E. Oak Street, Kingman.

NAVAJO: Claude H. Peterson, M.D., President, 1500 Williamson Ave., Winslow; Leo L. Lewis, M.D., Secretary, Santa Fe Medical Offices, P. O. Box 673, Winslow.

PIMA: Darwin W. Neubauer, M.D., President, 720 N. Country Club Drive, Tucson; Seymour A. Shapiro, M.D., Secretary, Bldg. 24, Med. Square, 1601 N. Tucson Blvd., Tucson. (Society Address: 2555 East Adams Street, Tucson)

PINAL: Chalmers D. Johnson, M.D., President, 1195 N. Arizona Blvd., Coolidge; Richard F. Adamson, M.D., Secretary, Florence Medical Center, Florence.

SANTA CRUZ: Karl Meyer, M.D., President, 711 Morley Ave., Nogales; Charles S. Smith, M.D., Secretary, Gebler Building, Nogales.

YAVAPAI: Dennis R. Semkin, M.D., President, 533 W. Gurley Street, Prescott; William R. Shepard, M.D., Secretary, 1003 Division Street, Prescott.

YUMA: James Volpe, Jr., M.D., President, P. O. Box 1151, Harold N. Gordon, M.D., Secretary, 1832 8th Avenue, Yuma. (Society Address – P. O. Box 4370, Kofa Substation, Yuma)

WOMAN'S AUXILIARY TO THE ARIZONA MEDICAL ASSOCIATION – 1966-67

President Mrs. Robert G. Delph (Grace)
2019 North Crescent Drive, Flagstaff, Arizona

President-Elect Mrs. Elvie B. Jolley (Mila)
Box 919, Bisbee, Arizona

1st Vice President Mrs. Richard Hardenbrook (Kaaren)
316 Grove Avenue, Prescott, Arizona

2nd Vice President Mrs. Charles Matheus (Marilyn)
2148 East 25th Street, Yuma, Arizona

Secretary Mrs. Richard Timmons (Evelyn)
5302 N. 69th Place, Scottsdale, Arizona

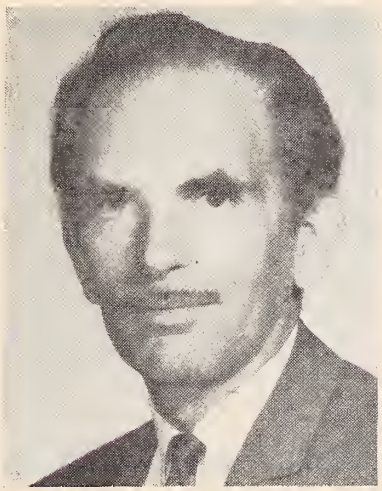
Treasurer Mrs. James Parsons (Carolyn)
5251 E. Hawthorne Pl., Tucson, Arizona

Director Mrs. James B. Tucker (LaVerne)
700 East 10th Street, Casa Grande

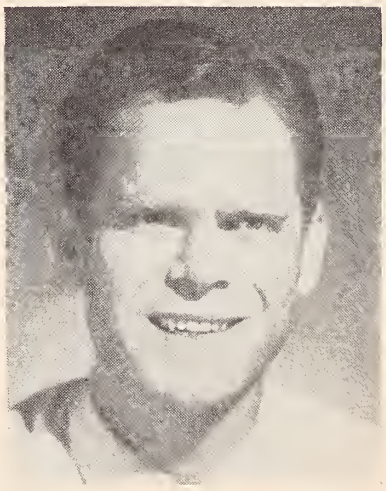
In Arizona...
These Syntex men serve the physician



Jerry Aslanian
Phoenix, Arizona
955-4215



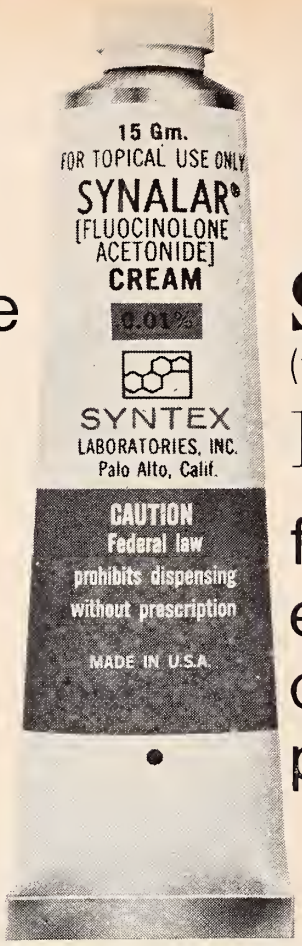
Dennis Deniston
San Bernardino, California
862-4975



Joseph Hill
Tucson, Arizona
623-1708

SYNTEX
LABORATORIES INC., PALO ALTO, CALIF.

new small size



Synalar® 0.01%
(fluocinolone acetonide) **cream**
15 Gm.

for even greater economy in office or hospital practice

the superiority topical with the

Now you can prescribe as little or as much Synalar Cream 0.01% as is needed for a particular therapeutic problem in a size that permits the greatest economy for your patient. The new 15 Gm. tube, for example, is best suited for short-term therapy and for small sites. For more extensive body areas prescribe the 45 Gm. tube—a size that's also ideal for your treatment table. And the 120 Gm. jar is most economical for hospital use. Thus, with Synalar Cream 0.01%, you have the superiority of a modern topical corticosteroid shown to be more effective than 1% hydrocortisone[1-3] plus the economy that makes therapy practical for use in more dermatologic conditions, in long-term maintenance, with occlusive dressings in resistant cases, and in extensive area involvement.

Contraindications: Tuberculous, fungal, and most viral lesions of the skin (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use. Contraindicated in individuals with a history of hypersensitivity to any of its components. **Precautions:** 1. *General*—Synalar Cream 0.01% is virtually nonsensitizing and nonirritating. Where severe local infection or systemic infection exists, the use of systemic antibiotics should be considered, based on susceptibility testing. While topical steroids have not been reported to have an adverse effect on pregnancy, the safety of their use on pregnant females has not absolutely been established. Therefore, they should not be used extensively on pregnant patients, in large amounts, or for prolonged periods of time. 2. *Occlusive dressing method*—With occlusion of extensive areas, systemic absorption of the corticosteroid may occur, and suitable precautions should be taken. Occasional patients may show contact sensitivity to a particular dressing material or adhesive. Miliaria, folliculitis, or pyodermas have been seen infrequently with the use of this technique. The development of infection requires appropriate antibacterial therapy and discontinuation of the occlusive dressing method. Local atrophy and striae have been reported with protracted occlusive dressing therapy. While lesion relapses can be expected to occur in many psoriatic patients, remissions may persist for several weeks to several months in favorable cases. The patient whose psoriasis is in an active stage, with recent appearance of new lesions, may not be a good candidate and may show early relapse. Some plastic films may be flammable, and due care should be exercised in their use. Similarly, caution should be employed when such films are used on or left near children to avoid the possibility of accidental suffocation. **Side Effects:** Side effects are not ordinarily encountered with topically applied corticosteroids. As with all drugs, however, a few patients may react unfavorably to Synalar under certain conditions. **References:** 1. Cahn, M. M., and Levy, E. J.: J New Drugs 1:262 (Nov.-Dec.) 1961. 2. Meenan, F. O.: J Irish Med Ass 52:75 (Mar.) 1963. 3. Robinson, H. M., Jr., Raskin, J., and Dunseath, W. J. R.: Southern Med J 56:797 (Jul.) 1963.

of a modern corticosteroid economy of hydrocortisone

Now...a choice of 3 economical sizes



120 Gm. jar



15 Gm. tube



45 Gm. tube

fluocinolone acetonide — an original steroid from

SYNTEX

LABORATORIES INC., PALO ALTO, CALIF.

Norinyl® tablets

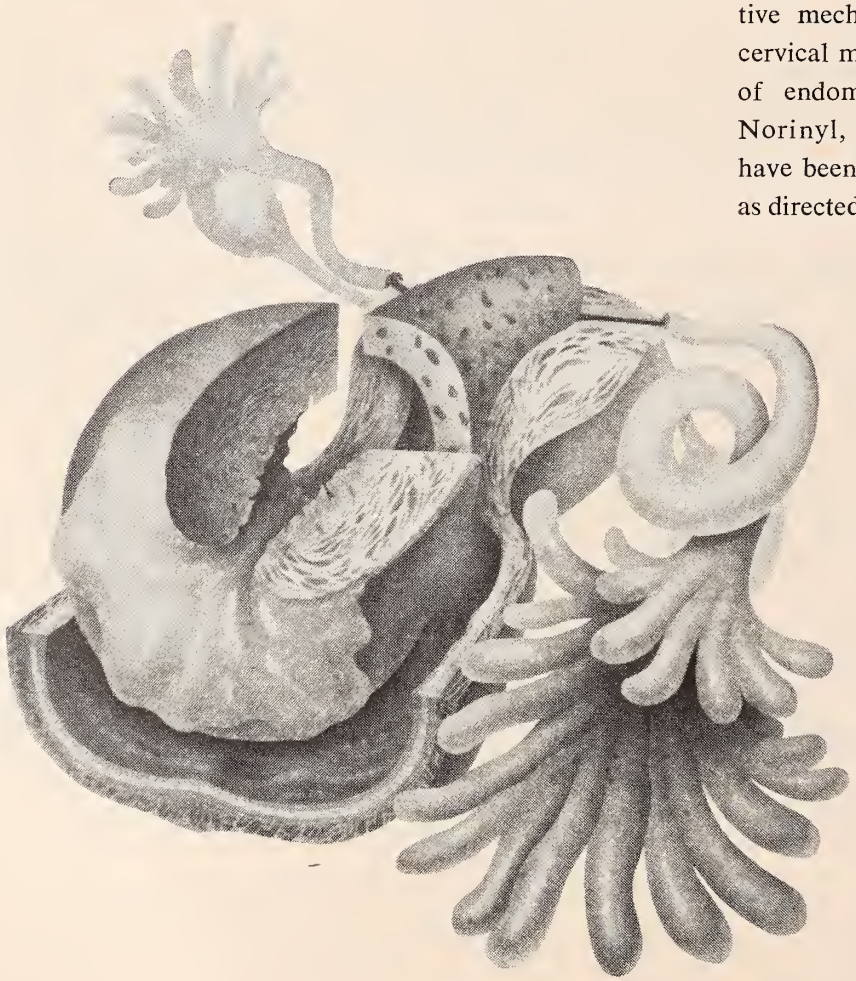
(norethindrone 2 mg. ± mestranol 0.1 mg.)

for multiple contraceptive action that has produced a record of unexcelled effectiveness

inhibition of ovulation by means of 2 time-proved hormonal agents

production of a cervical mucus hostile to sperm motility and vitality

creation of an endometrium unreceptive to egg implantation



no unplanned pregnancies

Norinyl provides multiple action for maximum assurance of success. It does not depend on ovulation inhibition alone for contraceptive effectiveness. The mechanism of action of combined hormonal therapy results in ovulation inhibition reinforced by other protective mechanisms, including a hostile cervical mucus[1-13] and an acceleration of endometrial changes.[1-3,7-16] With Norinyl, no unplanned pregnancies have been reported to date when used as directed.

plus important supportive benefits that help her through those critical early months of oral contraception

low incidence of side effects
Low incidence of BTB and spotting, nausea and amenorrhea tends to minimize side effect problems and increases patient cooperation.

no confusion about dosage
An unbreakable "confusionproof" package makes it easy to adhere to prescribed dosage schedule: individually sealed tablets numbered from 1 through 20 *plus* monthly calendar record enables patient to double-check dosage intake by day and corresponding tablet number.



Contraindications: Thrombophlebitis or pulmonary embolism (current or past). Existing evidence does not support a causal relationship between use of Norinyl and development of thromboembolism. While a study which was conducted does not resolve definitively the possible etiologic relationship between progestational agents and intravascular clotting, it tends to confirm the findings of the Ad Hoc Advisory Committee appointed by the Food and Drug Administration to review this possibility. Cardiac, renal or hepatic dysfunction. Carcinoma of the breast or genital tract. Patients with a history of psychic depression should be carefully studied and the drug discontinued if depression recurs to marked degree. Patients with a history of cerebral vascular accident.
Warning: Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions, medication should be withdrawn.
Precautions: By May 1963, experience with norethindrone 2 mg.—mestranol 0.1 mg. had extended over 24 months. Through miscalculation, omission or error in taking the recommended dosage of Norinyl, pregnancy may result. If regular menses fail to appear and treatment schedule has not been adhered to, or if patient misses two menstrual periods, possibility of pregnancy should be resolved before resuming Norinyl. If pregnancy is established, Norinyl should be discontinued during period of gestation since virilization of the female fetus has been reported with oral use of progestational agents or estrogen. When lactation is desired, withhold Norinyl until nursing needs are establlshed. Existing uterine fibroids may increase in size. In metabolic or endocrine disorders, careful clinical preevaluation is indicated. A few patients without evidence of hyperthyroidism had elevated serum protein-bound iodine levels, which in the light of present knowledge, does not necessarily imply hyperthyroidism. Protein-bound iodine increased following estrogen administration. Bromsulphalein retention has occurred in up to 25% of patients without evidence of hepatic dysfunction. Studies from 24-hour urine collections have shown an increase in aldosterone and 17-ketosteroids and decrease in 17-hydroxycorticoid levels. Thus, Norinyl should be discontinued prior to and during thyroid, liver or adrenal function tests. Because progestational agents may cause fluid retention, conditions such as epilepsy, migraine and asthma require careful observation. Thus far no deleterious effect on pituitary, ovarian or adrenal function has been noted; however, long-range possible effect on these and other organs must await more prolonged observation. Norinyl should be used with caution in patients with bone, renal or any disease involving calcium or phosphorus metabolism.
Side Effects: Intermenstrual bleeding; amenorrhea; symptoms resembling early pregnancy, such as nausea, breast engorgement or enlargement, chloasma and minor degree of fluid retention (if these should occur and patient has not strictly adhered to medication plan, she should be tested for pregnancy); weight gain; subjective complaints such as headache, dizziness, nervousness, irritability; in a few patients libido was increased. In a total of 3,090 patients, 2.2% discontinued medication because of nausea.
NOTE: See sections on contraindications and precautions for possible side effects on other organ systems.
Dosage and Administration: One Norinyl tablet orally for 20 days, commencing on day 5 through and including day 24 of the menstrual cycle. (Day 1 is the first day of menstrual bleeding.)
Availability: Dispensers of 20 and 60 tablets; bottles of 100.

References: 1. Council on Drugs. JAMA 187:664 (Feb. 29) 1964. 2. Bryans, F. E.: Canad Med Ass J 92:287 (Feb. 6) 1965. 3. Goldzieher, J. W.: Med Clin N Amer 48:529 (Mar.) 1964. 4. Cohen, M. R.: Paper presented at Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965. 5. Hammond, D. O.: Ibid. 6. Rice-Wray, E., Goldzieher, J. W., and Aranda-Rosell, A.: Fertil Steril 14:402 (Jul.-Aug.) 1963. 7. Goldzieher, J. W., Moses, L. E., and Ellis, L. T.: JAMA 180:359 (May 5) 1962. 8. Kempers, R. D.: GP 29:88 (Jan.) 1964. 9. Tyler, E. T.: JAMA 187:562 (Feb. 22) 1964. 10. Rudel, H. W., Martinez-Manautou, J., and Maqueo-Topete, M.: Fertil Steril 16:158 (Mar.-Apr.) 1965. 11. Flowers, C. E., Jr.: N Carolina Med J 25:139 (Apr.) 1964. 12. Goldzieher, J. W.: Appl Ther 6:503 (June) 1964. 13. The Control of Fertility. Report adopted by the Committee on Human Reproduction of the American Medical Association. JAMA 194:462 (Oct. 25) 1965. 14. Flowers, C. E., Jr.: JAMA 188:1115 (June 29) 1964. 15. Merritt, R. I.: Appl Ther 6:427 (May) 1964. 16. Newland, D. O.: Paper presented at Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965.

norethindrone—an original steroid from
SYNTEX
LABORATORIES INC., PALO ALTO, CALIF.

Norinyl® tablets
(norethindrone 2 mg. ē mestranol 0.1 mg.)
for multiple contraceptive action



IDENTI-CODE™

(formula identification code, Lilly)

takes the guesswork out of product identification

A special letter-number symbol will appear on each Lilly capsule or tablet. By checking this code against the *Identi-Code Index*, you will be able to identify each unit quickly and accurately:

In cases of overdosage

As a safeguard against error

When medication was prescribed by another physician

When the prescription label is lost

During telephone conversations with patients

A complete explanation of Identi-Code and its use is provided in the *Identi-Code Index*. If you have not yet received an index, your Lilly representative will be pleased to supply you with a copy.

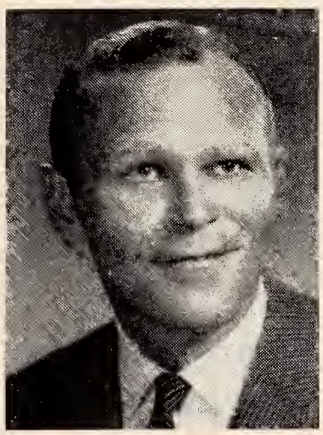
Representative Lilly Products Bearing Identi-Code

Pulvule®	Enseal® (enteric-release tablet, Lilly)	Capsule-Shaped Tablet	Elliptical Tablet	Round Tablet
Lilly H06 Lilly H06	Lilly A01	Lilly U07	Lilly C32	Lilly U04

ELI LILLY AND COMPANY, INDIANAPOLIS, INDIANA 46206 601553

Lilly

Hidden Hemorrhage: An Uncommon Complication of a Common Operation



Arthur R. Nelson, M.D.



Lee B. Brown, M.D.

Doctors Nelson and Brown have called attention to a rare complication that can happen to any surgeon performing removal of discs in the lumbar area through the posterior approach. Depending upon the level, the aorta or the iliac vessel may be punctured. This complication could happen more readily if the annular ligament was degenerated in the anterior portion of the spinal column. Immediate and early recognition of this complication is every important and any sudden fall in blood pressure during disc surgery should alert the surgical team to the possibility of this complication, and with rapid and appropriate treatment good results should be obtained.

Disc surgery in the lumbar area is a common operation, done with a low morbidity and mortality. Since Mixter and Barr[6] first described excision of herniated nucleus pulposus in 1934, there have undoubtedly been thousands of such procedures done with satisfactory results.

There is, however, a rare complication of disc surgery which deserves emphasis for the simple reason that the complication will carry a fifty percent mortality if unrecognized. This is the occasional traumatic perforation of the aorta or great iliac vessels during disc removal.

When such damage is isolated to the aorta or upper iliac arteries, as it usually is, there is frequently no indication of visible bleeding to the operating neurosurgeon or orthopedist. The rapid appearance of occult hypotension with developing surgical shock may be the only indication of major vessel damage. In less than half of such patients studied by De Saussure[2] was there any indication of unusual bleeding in the operative field. The apparent reason for the failure of massive bleeding to appear in the wounds

Phoenix, Arizona

is the relative elasticity of the anterior longitudinal ligament, degrees of fibrosis and adherence to the aorta, osteophyte perforation, or anatomic adhesion from prior operations may contribute to easier injury of the vessel.

It should be emphasized that these injuries have occurred in the hands of capable and highly experienced surgical specialists. The fact that there is no apparent means of avoiding this complication, demands early recognition of its possibility if survival is to be obtained. In an excellent review by Boyd and Farha in 1964, they report an extremely high mortality in a collected series.[1] In Harbison's[4] series, thirteen of nineteen patients who did not receive immediate treatment died.

There are some twenty-five recorded cases of arteriovenous fistulae (aorto-iliac and aorto-caval) where recognition of the injury was delayed in several instances until cardiac enlargement and early decompensation were noted.[1]

Two recent cases of direct vascular injury during disc surgery are presented below. It is to the credit of the operating orthopedists that early recognition in both instances produced urgent laparotomy and successful repair without complication.

Case Reports

Case 1. H. P., a 36 year old white female, was admitted to the Good Samaritan Hospital for laminectomy and fusion following a long history of demonstrated discogenic disease at the L 3-5 levels. Her past history was unremarkable, and her general physical examination normal save for the orthopedic problem. On February 18, 1966, she underwent laminectomy in the usual prone position, the operative procedure being uneventful until near the end of the disc removal, when the anesthesiologist reported a significant fall in blood pressure and associated tachycardia. A single transfusion was given, the patient stabilized, and the decision to proceed with the fusion agreed upon. The fusion was nearly complete when the patient again went into shock for no apparent visible reason. She was immediately transfused again with one unit, and returned to the recovery room. Here the patient showed progressive signs of peripheral collapse, with impalpable blood pressure, pallor, tachycardia, mental obtundation, sweating and finally unresponsiveness. Her abdomen became tense and quite obviously distended. Surgical consultation was secured, and with continuing rapid transfusion, she was returned to the operating suite for emergency laparotomy.

A massive retroperitoneal hematoma which had spontaneously necessitated through the posterior peritoneum in the region of the aortic bifurcation was released. A one cm. punched-out perforation of the medial aspect of the aortic bifurcation extending into the most proximal left iliac artery was exposed. A corresponding perforation of the proximal left common iliac vein was visualized. Because of the angular perforation of the bifurcation, it was repaired by transection of the iliac through the tear, and direct re-anastomosis to the aorta. The venous tear was repaired by simple suture.

The patient received a total of twelve units of blood throughout the two procedures and in the recovery room. Her postoperative course was benign and her convalescence has proved totally satisfactory.

Case 2. F. P., a 43 year old white male, was demonstrated to have herniated disc at L5-S1 level with nerve root compression of the S1 root. His past history and general physical examination were otherwise non-contributory.

On March 18, 1966, orthopedic exploration of the area by laminectomy was carried out, and using a pituitary rongeur, the L5-S1 nucleus removed. Almost immediately upon completion of the resection, the patient's blood pressure dropped to unrecordable levels, but responded to rapid transfusion. By continuous transfusion, his pressure held at 70/0 while the laminectomy wound was closed and surgical consultation called for.

The patient was rolled to the supine position and laparotomy begun about one hour after the

beginning of the hypotensive episode. Massive retroperitoneal bleeding was noted, and a posterior laceration of the right common iliac artery exposed. The laceration had nearly severed the iliac from its origin at the aortic bifurcation. The repair was completed by inserting an 8 mm. Dacron short-segment graft from distal aorta to the transected common iliac.

The patient's postoperative course was benign save for the development of an acute epididymitis of short duration. His late convalescence has shown no evidence of arterial insufficiency, all distal pulses being vigorous.

Summary

Two cases of instrumental injury of the aorta and iliac vessels during disc removal are reported. Recognition of the injury and early laparotomy with repair resulted in good results in both.

The gravity of the injury is emphasized. It may carry a mortality of fifty percent. In view of the fact that there seems to be no means of total avoidance, awareness of the probability of injury and urgent laparotomy is encouraged.

BIBLIOGRAPHY

1. Boyd, D. P., and Farha, G. J.: Arteriovenous Fistula and Isolated Vascular Injuries Secondary to Intervertebral Disc Surgery. Ann Surg 161: 524, 1965.
2. De Saussure, R. L.: Vascular Injury Coincident to Disc Surgery, J. Neurosurg 16: 222, 1959.
3. Fortune, C.: Arteriovenous Fistula of Left Common Iliac Artery and Vein, Med. J. Aust. 1: 660, 1956.
4. Harbison, S. P.: Major Vascular Complications of Intervertebral Disc Surgery, Ann Surg. 140: 342, 1954.
5. Leavens, M. E. and Bradford, F. K.; Ruptured Intervertebral Disc; Report of Case with Defect in Anterior Annulus Fibrosus, J. Neurosurg 10: 544, 1963.
6. Mixter, W. J. and Barr, J. S.: Rupture of the Intervertebral Disc with Involvement of the Spinal Canal, New Eng. J. Med. 211: 210, 1934.

SUCCESS WITHOUT GOVERNMENT REGULATION

The medical profession expects the drug industry to operate in a responsible manner just as the FDA does. It is inconceivable that the present and past record of the drug industry in the United States could have been achieved by any widesspread lack of responsibility. It is to be remembered that this record was achieved without absolute governmental regulation. This is a good time for the doctors to come to the defense of the drug industry and to point out to the public the tremendous contribution the industry has made to the health of the nation. — Walter S. Coe, M.D., in *Journal of the Kentucky Medical Association*, (64:587), July 1966.

The Changing Face of Health Care

Physicians, Hospitals and Graduate Education

Eric G. Ramsay, M.B., Ch.B., F.A.C.S.

The medical profession is faced with some very basic changes in existing patterns of medical care. A plea is made for all physicians to become personally involved in planning for the future.

Challenge and Promise

The present turmoil over packaging, delivery and control of health-care services will increase steadily over the next decade. Throughout this change in established concepts, physicians may well be harrassed and criticized, but at the same time will also be consulted. Herein lies the opportunity for realistic adaptation and progress and it is imperative that the profession take a detailed look at the future of medical services in this country. True, planning for this will need much help from all associated with such services, but it is the physician who really *knows* what constitutes high quality of medical care and this must be our focus. It is the physician who can, and should produce awareness of the problems involved, and provide the motivation and leadership to find their solution.

The public is medically more sophisticated than at any other time, more demanding of services and more critical of the apparent lack of real concern for the provision of superior medical care for everyone. Other members of the health team beside physicians are seeking increased recognition and responsibility. The technical advances in medicine increasingly tend to dissociate the physician from his patient in the traditional sense and the doctor who personally performed every service for his patient, and was "all things to all people," is fast disappearing. Can we ignore these changes? Can we leave the problems to the individual physician and his patient, or the government, the A.M.A. or the A.A.M.C.?

There is really no doubt what our answer must be, if we are to maintain our standing as an

Director of Medical Education
Tucson Hospitals Medical Education Program

honorable, intellectual and morally concerned profession. We can, and must, adapt, progress and aim for excellence.

Before being carried away with lofty ideals, we should pause to identify our goals and the means available for reaching them. In a country such as ours, with its prodigious wealth and resources, the standards of medical care should be a shining light to the rest of the world. Glibly we say these standards are the highest, and indeed they are — but not for all, by any means.

Cogent arguments can be advanced to place the blame for areas of deficient medical care on any one of many groups, but to what avail? Suffice to say there is a "health care gap," a definable problem which must be faced.

The public has reached the decision that good medical care for all is now a right, not just a privilege. The government has stated this in no uncertain terms by producing the most sweeping legislation under Titles XVIII and XIX of Public Law 89-97 and other bills, which will revolutionize the distribution of medical care. Is the profession prepared for this change and what do we believe are the limits of our responsibility?

Basic Concepts

Our objectives as a profession and as individual practitioners should be to make available to everyone, the finest possible health and medical care. Whether or not people avail themselves of this service is their choice, but this does not absolve us of the responsibility to inform them as to what is beneficial or available. Indeed this becomes of paramount importance in our educational efforts.

No matter what our personal feelings may be regarding the enormous expense involved, or the cumbersome machinery of Government, recent legislation has provided a practical opportunity to achieve our goal. This opportunity should be developed to its maximum potential, not by the impersonal or uninformed, but by thoughtful, concerned professionals.

The means by which we seek our objectives are the well-known and oft-stated triad of Teaching, Research and Service. Development of these basic concepts into the myriad details of medical services can produce an organized plan for comprehensive health care, available to everyone.

Teaching and learning must forever remain at the core of our efforts. Without these, all other efforts go for nought, for then there is no progress, no continuity, no lasting benefit. It is obvious this cannot be left entirely to our universities and medical schools, some of which have closed their doors, with little concern for the medical needs of their communities. Although they have belatedly realized their larger responsibilities of leadership in both education and health care, it will be some time before ideas are translated into widespread action. In the broad field of medical education we must face the fact that recent legislation is almost certain to eliminate the large indigent hospitals of the past, and the role of community hospitals will assume increasing importance. It is therefore incumbent upon the entire medical profession to remain attuned to the importance of basic and continuing education.

Research has come to occupy a position of high esteem in the medical field, and rightfully so. Virtually all our modern advances have been achieved in the laboratory, not from patients' bedsides. The enormous volume of present day research leads to the conclusion that it is a flourishing flower, unlikely to wither in the foreseeable future. The application of research methodology to clinical areas is producing ever-increasing analysis and constructive criticism of our own efforts as clinicians. Along with this, we must be sure the control of the quality of our services does not interfere with the freedom to practice as individuals; a difficult task.

The third factor of our triad of means is the end product — service to patients. Perhaps the most important characteristic of a good practitioner is his concern for, and deep sense of responsibility to his patients. All his other achievements can accrue from this — his continual self-education and analysis, his research and his service. To these we must add the concern of every physician for the planning of future health care, in whatever capacity his talent and circumstances permit.

Legislative Trends and Implications

Legislation relating to medical services is well known, but perhaps the most striking and far reaching in its implications is Title XIX.

Admittedly much of the specific result will depend upon details of state action in developing the law, but act they must within the next few years—some have already done so. The eventual result cannot be much in doubt however, for sooner or later all patients will become "private patients" supported either by their own self-purchased health insurance, or that offered by the government. The trend quite obviously is to incorporate the "medically indigent" into the general pattern of care for the rest of the populace.

The impact of this on all providers of health care will be enormous. Greater hospital utilization and a corresponding decrease in volume of "county" or "city" hospital patients will be inevitable. Hospitals for the indigent will either disappear or become community hospitals in the broad sense. The provisions for hospital out-patient care will increase the tendency towards hospital-based medical practice. This, in itself, will produce considerable problems of coordination and control, as well as the preservation of the personal relationship between doctor and patient.

One of the greatest changes will be in the field of medical education — graduate as well as under-graduate. Teaching hospitals that depend primarily on large numbers of indigent patients will face very real problems, and this alone will necessitate that community hospitals become increasingly involved in education. The participation is already fairly extensive — over 52 percent of all residents receive their training in non-university affiliated hospitals in this country. In essence, graduate education will in all probability revert to a modification of the old preceptorship concept, with emphasis on a team approach to patient care. To do this while preserving the patient-doctor relationship would be no easy task, requiring the cooperation of both physician and patient.

Goals

We have already considered the ultimate goal of "comprehensive personal health care." This is indeed a comprehensive concept including prevention of disease as well as treatment, availability of medical care at any time, correlation of out-patient services, in-hospital, nursing-home, doctor's office and patient's-home care. This presents serious problems of coordination if we are to keep our main goal in mind. Part of this goal is to avoid fragmentation of services which is encouraged by the super-specialization of our age. Basically, it calls for a large group of physicians who are not only highly trained scientifically, but also thoroughly indoctrinated in the comprehensive care concept. They will be the frontline of patient care and contact, and will utilize the services of sub-specialists as needed. The present trend of internal medicine practice towards this concept is already apparent. We cannot count on general practitioners in the accepted sense to provide this service. We must face the fact of their relative and steadily increasing scarcity in most communities. The failure of general or family practice residency programs to remedy this deficiency is quite obvious to even the casual observer.

Avoiding piece-meal service involves much more than physicians' efforts alone — it has to be prevented in hospitals. Hospitals must be truly general and, where necessary, by close affiliation with other agencies, provide comprehensive services — acute and chronic illness, psychiatric and out-patient facilities and many others. "Progressive patient care" must be developed to the fullest. To accomplish all this in a practical manner will require planning, coordination and understanding of the highest degree. There simply will not be sufficient doctors to achieve this alone, and all members of the health care team must be developed to their maximum ability, with appropriate responsibility in the overall picture. The physician will still be of the utmost importance, but more as the leader of a team than as an isolated individual.

The role of medical schools will require study and re-evaluation. It would appear reasonable to assume that the primary duty of a medical school is improvement of medical care by training better physicians. The details of accomplishment of this end are naturally the subject of much debate, and no doubt will undergo many changes in the future. The emphasis on research and the highly scientific approach to medicine must remain, along with thorough teaching of the fundamentals of medical knowledge. However, students must learn the meaning of comprehensive care and their personal responsibility for its provision. Without medical schools being more involved in the health-care needs of the commu-

nity than many of them are, it is difficult to see how they can teach this concept or really fulfill their purpose. The degree of their involvement must obviously be limited, to avoid interference with their basic teaching responsibility, but there must be active participation in study of the community's needs and available services.

Means

We have previously discussed the basic means of achievement of our aims through teaching, research and service. The problem remaining is the provision of the environment in which these can be accomplished. Medical schools and their presently affiliated hospitals cannot provide all the facilities to teach and train the large numbers of personnel required. As discussed previously this means greater community hospital involvement, hopefully with close liaison and cooperation from the medical schools. The following remarks concern the role of individual hospitals and physicians who are actively involved in graduate education. Communities not so involved will face somewhat different problems, that will not be discussed here.

It is immediately evident that not all hospitals can participate in formal training programs for graduates. There has to be a basic complex of services and facilities available for the program to have depth and value, maintaining a scientific and academic environment. Coordinating the factors of service to the private patient, his freedom of choice of physician, the community hospital, the individual practitioner and the concept of comprehensive care calls for ingenuity and foresight. The needs and circumstances of various communities and hospitals differ widely, and so will the solutions that are found. For the average community hospital involved with graduate education, however, a broad general plan can be formulated. The essential theme of non-fragmentation of care must be preserved and this can best be accomplished through the development of a large coordinated out-patient service, where patients may choose their own physician. Services offered must be all-inclusive, and correlated with acute hospital and convalescent care. Overall guidance for any one patient should be provided by that patient's physician.

Doctors may see a percentage of their patients at the clinic rather than at their office, and some may even elect to see all their patients in this out-patient department. Details of the clinic's operation must be worked out to avoid the delays and impersonal atmosphere so often associated with such large facilities in the past.

Interns and residents may be assigned to participating physicians for relatively prolonged periods, so that continuity is maintained. Only those physicians who demonstrate the willingness and ability to teach effectively in this environment should have house-staff assigned to them. The intern and resident, working in close liaison with their "preceptor" would develop a satisfactory relationship involving the patient, themselves and the attending physician, and would participate in all phases of the patient's care. Utilization of the other services available, including consultation, would be encouraged, but always under the direction of the patient's "team", and his personal physician. Consideration must be given to the necessity of 24-hour care through emergency services or night clinics, bearing in mind that the leader of the team may be unavailable at certain times.

There is, of course, nothing new in this idea and it is certainly not without difficulties. It requires considerable cooperation from all concerned and also brings with it some degree of supervision and control — but control aimed at quality of care and quality of teaching. Most of us are already well accustomed to some form of such control and self-discipline in the hospitals in which we work, and in all honesty must admit that it does indeed tend to elevate the standards of medical practice.

A Plan of Action

There are many questions to be answered. Do we encourage group practice, or make every effort to preserve the solo practice of medicine? How much practice should be associated with hospital out-patient departments? What are we doing to educate and train other members of the team to accept responsibility to the maximum of their abilities? How will we improve emergency care in our hospitals? Which hospitals will train interns and residents? How do we adapt medical education at all levels to new legislation?

These and many other problems require solution, but only after detailed discussion and study.

Physicians in every community should be involved in this expanding, turbulent area, so that we may establish order and avoid chaos so that we are not dependent on others far removed for our future and our fate. No matter what our situation or specialty, we can act now to plan effectively for the future, utilizing the services that will become available. Who is better qualified for leadership in this field than mature, experienced, knowledgeable and sympathetic physicians?

So far we have discussed the trends, the opportunities, the ultimate goals. How do we translate our thoughts into a practical plan of action for our own community or hospital? Bearing in mind the plea for leadership from physicians, the following is suggested:

1. Thoughtful acceptance of our own duty as physicians to become personally involved in planning for the future of community health services.

2. Presentation to our staff of the importance of local study and action now, with a plea not to wait for "someone else" to make the first move and do our planning for us.

3. Formation of a group to study the legislative details, the needs of our own community and hospital, and the implications of both for the next decade or so.

4. Development of a realistic plan to reach the goal of comprehensive care for all, using every facility and service available.

5. Implementation of the plan step by step over the years, so that we are not suddenly confronted with an extensive problem, quite unprepared for its effective solution.

In summary, we must provide inclusive facilities for patient care and graduate teaching through integrated out-patient and in-patient services, developing the concept of preceptorship and the team relationship with our patients. The destruction of the individual patient-doctor relationship need not occur if conscientious effort and consideration is obtained from all involved. Physicians, those who truly under what quality of medical care means, must provide the motivation and the leadership to reach our goals.

It is indeed a time of challenge and promise.

NURSING WAITS:—
"...between things ended and things begun"



Bette Clemons, R.N.

The scientism of medicine has diluted the role of the nurse and the physician in their responsibility to the patient. The tender, loving care of a sick human demands people who practice the "laying on of hands"; who exhibit an understanding of the need for an attentive, sympathetic ear when the ill are under physical and mental stress; plus an abiding compassion for the misfortunes of the one who is sick. Specifically this demands a visitation span per patient of greater magnitude than anyone cares to give in these days of multitudinous esoteric distractions.

The present trend of nursing is away from the overbearing dictatorship of the physician, into the clear, bright, blue yonder of being honorific and independent. From a purely personal standpoint the new type of nurse must have a feeling of great accomplishment. The freedom gained by her must be accepted by the rest of us as further evidence of the full emancipation of women.

Miss Clemons brings forcibly to our attention the need for the practical aspect in nursing as an absolute, ineradicable essential. To this I heartily agree and endorse her every word.

The real issue before us is of great magnitude. We must avoid an irreversible stalemate on how nurses should be educated. The time is very late for a frontal attack on the essential problem — who and how will we care for our sick?

IN REPRESENTING the technical nurse do I represent the backbone of nursing, a dying species, or a combination of both? The essential issues are not confined to this platform as they well may determine the fate of nursing; what nurses will be to patients, and how nurses are to be created.

Medicine and nursing, like all else on this earth, have never been fixed — things are different and will continue to be different. The nurse who bemoans the fact that things were done differently in her day is quite right; the trouble comes when we tend to accept our individual day of entrance upon the scene as level ground, failing to recognize the moment as a mere facet of nursing's evolution.

Familiarity with our history is of equal importance to keeping abreast with today's rapid changes. It adds much needed perspective, which doubles as a stabilizer. No one can envision our future course without understanding where we are today and how we got here.

What may appear to be the latest innovation is very often the revival of an idea from the forgotten past. I point, for example, to The American Nurses Association First Position on Education for Nurses (commonly referred to as the "Position Paper"), which calls for nurses to be classified as PROFESSIONAL or TECHNICAL.[1]

Presented at the 75th Annual Meeting of the Arizona Medical Association on April 28, 1966, during the panel discussion "Trends in Nursing Care."

As far back at 1907 attempts were made to "grade nurses," categorizing them as "executive or teacher, bedside nurse, and attendant nurse." All nurses were to have special training and were to be registered after examination. The original plan bogged down with the alarming discovery that untrained nurses simply outnumbered the trained ones. Educators have revived the system of grading nurses today. The future education proposed for both groups is where we take issue, for heavy emphasis has been placed upon theory with an ever diminishing value of technical or practical education.

It seems a curious fact that the down grading of the technical aspects in nursing, which began as a private skirmish between operating room and the higher echelon in nursing, now engulfs all of nursing.

We are promised a continuing place for the technical nurse. At the same time we are assured of an increase in the trend of teaching to take place solely on the University Campus, which demonstrates confusion about how she is created.

Motivated by an ever widening scope of non-hospital nursing on one hand and medical science breakthroughs on the other, educators would meet both needs by the use of identical teaching methods swinging away from in-hospital teaching. Dialysis, kidney transplant, medical and surgical treatment in the hyperbaric chamber, coronary care and all manner of intensive care demand technical excellence of the nurse. Yet we seem bent on nursing by an indirect system.

However splendid these recent advances in medical science may be, collectively they could never match the vast need for change wrought by the advent of asepsis. Yet these needs were met, slowly, and none of us will ever know how haltingly or painfully, but they were met intelligently with a blend of theoretical background and vital technical training.

In the earliest of training schools students were overworked, undertaught and exploited. They were used by their hospitals rather than being educated or prepared to assume duties in nursing elsewhere. During the 1890's agitation among nursing leaders brought about a more thorough course of instruction for nurses. Nursing leaders sought to develop what they termed a well balanced nurse, feeling that theory, manual and cultural ingredients were all of equal importance to the betterment of "nursing care standards."[2] Have the needs of patients changed in 70 years so vastly as to alter that formula? College education, when long ago expressed as highly desirable for nurses, had as its express goal the "betterment of care the patient would receive."[2] The sad fact is that one no longer hears expressed concern for the quality of direct care rendered to patients, but instead alarming emphasis is placed upon STATUS for NURSES. Understandably, the ever increasing national appetite for education is mirrored in nursing. Alexander Dumas warned "even virtues can become crimes by exaggeration." If the "University Campus" does not have its own hospital, where on the campus is the laboratory for this new "science" of nursing? Where does the student learn to meet and to control herself in the face of an emergency?

We are told that the "professional nurse" is to exercise "clinical nursing judgment."[1] Where does one acquire good judgment? What can be applied to pulsing flesh that is drawn from text book pictures alone? Florence Nightingale realized, "One does not treat pneumonia, one treats the PERSON who has pneumonia."[3] Care of diseases can be taught at the university campus; care of people can only be LEARNED at the bedside. Is not good judgment something one acquires BECAUSE of experience?

The prime reason offered for the swing away from hospital teaching to that of the campus is of "economic burden."[1] Where is the economy in having to pay persons whose sole duty it is to teach new graduate nurses how to function in a hospital?

How to finance schools of nursing is not a new dilemma — it has been with us since the beginning. In a questionnaire from one director of a nursing school to that of another the following was put forth: "The difficulty of raising money to carry on these institutions has only to be suggested in order to be appreciated. By placing our training schools more nearly on the same basis as that of other educational institutions, would not we attract a HIGHER GRADE of women into nursing?" The contemporary-toned questionnaire was dated 1887 and signed "Isabelle Hampton."

If the fact is that the burden at last has be-

come unbearable, perhaps it is time to lift it from the place it has chaffed. Rather than shifting the education of nurses to a university campus, their education should instead be shifted to hospitals scientifically and specifically organized for the purpose of educating nurses. In that setting a productive nurse could be formed with vitally necessary technical training in stable balance with applicable theory. This would permit the individual's specialization into education and administration to flower as her talents and desires unfold.

It is impossible to judge the ultimate outcome of the plan offered today. The plan which relies heavily upon theory alone cannot be measured, as no guage exists. One cannot point to the high quality of our heavily degreed educators and administrators of today, for each of them has risen from a fine technical and experienced background.

It is not alone the question of education that has put nursing on the block today. Something serious is happening to nursing itself. We will never cease our Old World flight, which we retain as our national characteristic – PROGRESSIVENESS. We dwell in the crucible of breakaway. The speed of our age has robbed us of time to ponder, stripped us of logic. In our eagerness to conform we have lost our willingness to question. Thus in the name of progress, we have let many things happen to us which were not necessarily a step forward. Social and economic changes since World War II opened the need for ancillary personnel to be pressed into service. To elevate the nursing care standards, the menial tasks and unpleasantries were removed from nurses' lengthy list of duties so that we could return to the bedside. Persons brought into play would work only under the close first-hand supervision of registered nurses. Old guard nurses expressed their resentments and fears, but were salved. "It would never happen, nurses would never be replaced at the bedside."

The ANA Position Paper puts it well when it says "Conditions of nursing, as that of any professional service, are determined by the structure of society and its prevailing values."[1] Tinsled values, alas, have taken their toll in nursing. Its spirit has been allowed to wane. First to be shed was its mainstay – discipline. Lost with that was respect. Discipline is vital to persons being taught to deal in life and death matters. Discipline is a necessary atmosphere and acquisition for a nurse who is to be responsible. A responsible person both displays and earns respect of others.

In an effort to recruit more women into nursing, compensation is also being updated. Fewer working hours for more money is a gratifying prospect to the most dedicated nurse. Now, former rewarding hard work is viewed as "social injustices" to nurses.[1] A misplaced emphasis overlooks an unalterable fact—woman's attraction to nursing is not monetary. The success of the Peace Corps' nurse recruitment has proven this.[4] The disclosure of a program "which offers vigorous training with emphasis on DIRECT INVOLVEMENT with people in need. . . ." should serve as a beacon.[4]

It is not alone a case of trying to make nursing more attractive to prospective students. Some find us "engaged in a struggle to wrest nursing from the clutches of those who would keep it a field of servitude rather than a field of professional service."[5] I believe we need not sacrifice one in order to attain the other. More clearly, we should not try. Nursing should remain subservient, but it need not be without dignity. If we have lost that, we should not seek to regain it by trying to change what nursing is. To reject and ignore our own tradition is to commit suicide. Tear out the roots of a plant and it will die.

The present day upheaval in nursing is such that living, working, being a registered nurse is trying to walk a straight line during an earthquake when nothing around you is stable. Desperately needing bedrock, we have forgotten that we have it in our nursing heritage.

Exercising infinite vision, Florence Nightingale foresaw what she felt would destroy nursing as she set down its potential dangers in 1893.[3]

1. a loss of "earnestness—dedication."
2. "mere money—getting purpose"
3. concentrating upon nursing as a profession rather than a calling.
4. ". . . there is another danger, perhaps the greatest of them all – it is this: as liberal education and colleges for women start, multiply and improve, some will believe that everything can be taught by book and by lecture, and tested by examination; that memory is the great step to excellence. Book learning is useful only to render

the practical health of the health workshop intelligent. No theories, no books can ever dispense with the need for that workshop."[3]

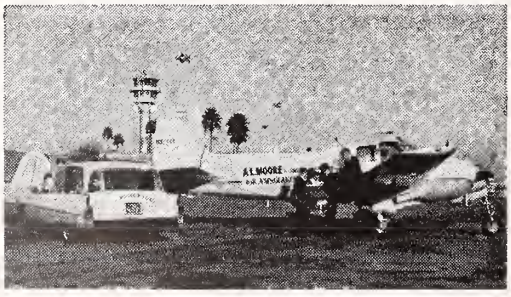
Needed in nursing today, 1966, is delicate balance. Balance in the control of nursing — in the fulfillment of the areas within nursing—in the means of educating nurses, and in the values, goals and aspirations for nurses. And the most careful balance of all — in the application of her skills to the needs of the patient. "We can work so hard at being a profession that we forget we have a commitment to the patient for care."[6]

"There certainly cannot be a more necessary or more noble or more God-like action than to administer to the wants of our fellow creatures in distress. While virtue or religion are known among mankind, this conduct will be approved; and while heaven is just, it will be rewarded."[6] Historically, someone has always been NURSE to the patient. The above, written in 1832 when Florence Nightingale was but twelve years old, bears this out; and so it will always be. The question is: whom do we want that person to be?

REFERENCES

1. "The American Nurses Association First Position on Education for Nurses." **American Journal of Nursing**, Vol. 65, No. 12, (1965), pp. 106-111. American Journal of Nursing Co., New York.
2. Goodnow, Minnie: "Development of Nursing in America," in 7th ed., **Nursing History**, Chap. 12, p. 301. Philadelphia, W. B. Saunders Co., 1943.
3. Nutting, Adelaide M., and Dock, Lavinia L.: "Miss Nightingale's Writings," in **A History of Nursing**, Vol. II. Chap. 5 pp. 207-286. New York, G. T. Putnam & Sons, 1907.
4. Coulter, Pearl: "This I Believe." **Nursing Outlook**, (April, 1966), pp. 31-33.
5. Scholtfeldt, Florence M.: "A Mandate for Nurses & Physicians." **American Journal of Nursing**, Vol. 65, No. 12 (Dec., 1965), pp. 102-105.
6. Straub, K. Mary: "Professional Nursing — Myth or Reality." (Address February 24, 1966, at the 13th National Congress of the Association of Operating Room Nurses.)

24-HOUR AMBULANCE SERVICE



MOTOR AND AIR

A. L. MOORE & SONS

Mortuary and Ambulance Service

Adams at Fourth Ave., Phoenix

AL 2-3411

The discomforts of

DIARRHEA
MUCOUS COLITIS
DIVERTICULITIS
SPASTIC URETERITIS
BLADDER SPASM

are relieved by direct musculotropic action with.....

Trocinate®

BRAND THIPHENAMIL HCl

Available in 100 milligram pink sugar-coated tablets.

The high therapeutic index permits dosage sufficient to relieve spasm promptly.

Administer 4 tablets every 4 hours until relief is constant, then adjust maintenance dosage.

Trocinate *BRAND* THIPHENAMIL HCl

Directly relaxes smooth muscle spasm
Combats hypermotility
Non-mydriatic, may be used in glaucoma

Sixteen years of clinical use, with absence of untoward effects, has established the safety and effectiveness of Trocinate.

Trocinate is metabolized in the body and completely eliminated, which is a safety factor. Dosage must be sufficient to maintain the therapeutic blood level.

DISPENSED IN BOTTLES OF
100, 250 AND 2000 TABLETS

Literature and samples sent upon request

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA
Manufacturers of ethical pharmaceuticals since 1856



"Yes, Doctor, the pain is gone."

■ Despite introduction of synthetic substitutes, efficacy of 'Empirin' Compound with Codeine remains unchallenged.

'Empirin'® Compound with Codeine Phosphate gr. ½ No. 3

Each tablet contains: Codeine Phosphate gr. ½ (Warning—May be habit forming), Phenacetin gr. 2½, Aspirin gr. 3½, Caffeine gr. ½.

Keeps the Promise of Pain Relief

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N. Y.

"'Tranquilizer' is not a good word"[1]

"THIS classification is psychologically too seductive, pharmacologically too unspecific, and in terms of results not infrequently untrue."[2]

What is a tranquilizer? According to the 24th Edition of Dorland's Medical Dictionary[3] a tranquilizer is "an agent which acts on the emotional state, quieting or calming the patient without affecting clarity of consciousness."

Defining a drug by its effects, however, can be misleading. The same effects by which the dictionary defines a tranquilizer have sometimes been seen after administration of a sedative — or, for that matter, a placebo.

Ambiguous though the term may be, it appears to be here to stay. The 1966 edition of the Physicians' Desk Reference[4] lists 42 tranquilizers indicated for treatment of anxiety and apprehensive states.

'Tranquilizers' have differences in action, differences in effect

Although all tranquilizers are intended to calm anxious patients there *are* differences in their actions — and in their effects. They have been divided into three categories — the rauwolfia group, the 'minor' tranquilizers, and the phenothiazines.[5]

Although the tranquilizing effect of rauwolfia has been known for centuries, its use as an antipsychotic agent in current practice has diminished.[5]

A 'minor' tranquilizer is often prescribed to achieve more than one effect. Thus, besides being tranquilizers some of these compounds may be muscle relaxants, antihistaminics with some calming action, anticholinergic sedatives, or antispasmodics.[5]

The phenothiazines are considered 'major' tranquilizers because they alter psychotic behavior.[1] This classification may have done them more harm than good because it implies that the phenothiazines should be reserved for the more severely disturbed. This is not necessarily true.

The phenothiazines — and the problem of sedation

One of the problems of prescribing phenothiazines for ambulatory patients has been the fear that excessive sedation will impair the patient's ability to function. This, however, is less of a problem with some of the phenothiazines.

"Clinically they may be differentiated primarily in terms of their potency and the extent of their sedative effect, which appear to be inversely proportional. That is, the least potent, the one which is used in highest dosage, chlorpromazine, is the most sedative, while the reverse holds true for fluphenazine."[6]

In a recent report on various studies conducted over several years evaluating 360 patients treated for anxiety and stress with seven phenothiazines, this inverse relationship of potency to sedation was confirmed.[7] Also under consideration was the degree to which the particular phenothiazines neutralized anxiety (the angolytic index). Interestingly enough there was, again, an inverse relationship. The most sedative of the phenothiazines appeared to be the least active in neutralizing anxiety. Fluphenazine, one of the least sedative, on the other hand, was found to be most effective in relieving anxiety.[7]

RELATIVE SEDATIVE AND ANGOLYTIC INDICES OF PRINCIPAL PHENOTHIAZINES*

DRUG	SEDATIVE INDEX	ANGOLYTIC INDEX	BASED ON STANDARD DOSE OF
Chlorpromazine	100	15	25 mgs.
Triflupromazine	100	15	25 mgs.
Thioridazine	90	17	25 mgs.
Perphenazine	15	25	4 mgs.
Carphenazine	25	25	25 mgs.
Trifluoperazine	3.3	95	2.0 mgs.
Fluphenazine	3.5	100	2.5 mgs.

*adapted from Sainz[7]

Prolixin is therapeutically effective without excessive sedation

When used as a 'tranquilizer' in general medical practice, in many patients Prolixin (Squibb Fluphenazine Hydrochloride) suppresses anxiety, but not normal activity. These two features are of particular importance to patients who must be able to live and work without their normal daily activities being restricted.

Because of its longer duration of action, Prolixin, in doses of as little as one to three milligrams in adults, generally taken once a day, is effective in maintaining many patients free of their symptoms of anxiety and tension.

Contraindications: Do not use with high doses of hypnotics or in patients with subcortical brain damage. Use with caution in patients with a history of convulsive disorders. Severe reactions may occur in patients with idiosyncrasy to other centrally-acting drugs, and severe hypotension may occur in patients with special medical disorders, e.g. mitral insufficiency and pheochromocytoma.

Precautions: Effects of atropine, anesthetics and C.N.S. depressants may be potentiated. Hypotension may occur in patients undergoing surgery. Do not use epinephrine for treatment of the hypotensive reactions which may appear in patients on phenothiazine therapy.

Side Effects: Extrapyramidal reactions, allergic skin reactions, the possibility of anaphylaxis, drowsiness, visual blurring, dizziness, insomnia, nausea, anorexia, salivation, edema, perspiration, dry mouth, abnormal lactation, polyuria, hypotension, and jaundice and biliary stasis may occur. Routine blood counts are recommended to determine possible blood dyscrasias; if symptoms of upper respiratory infection occur, discontinue drug and institute appropriate therapy.

Available: 1 mg. tablets. Bottles of 50 and 500.

For full prescribing information, see package insert

References: 1. Simpson, G.M.: Postgrad. Med *39*:557, 1966. 2. Freyhan, F.A.: Am. J. Psychiat. *115*:577, 1959. 3. Dorland's Illustrated Medical Dictionary, ed. 24, Philadelphia, W. B. Saunders Co., 1965, p. 1603. 4. Physicians' Desk Reference, 1966, Oradell, N.J., 1965, p. 310. 5. Cohen, S.: Northwest Med.: *65*:197, 1966. 6. Detre, T., and Jarecki, H.: Connecticut Med. *25*:553, 1961. 7. Sainz, A.: Psychosomatics *5*:167, 1964.

PROLIXIN®

SQUIBB FLUPHENAZINE HYDROCHLORIDE



Paul B. Jarrett, M.D.

It seems that a basic truth that must be faced however repulsive it may be to some, is that you can't run a hospital without doctors.

Physicians are the only ones who have the training, the insight and the ability to determine what constitutes the best in care for their patients, and the only ones who can supply or supervise that care.

This isn't a point that can be argued, it is established by experience and definition.

Another basic truth is that doctors are sometimes found by some people to be difficult. They are frequently resentful of demands that they conform to rules made for them, or that they adapt their thinking to conform to the "modern trend," or knuckle under to someone's idea of proper organization.

Traditionally the physician has been an independent agent. He has built his practice and reputation through his own dedication, skill and service. Understandably, he is proud of his calling and jealous of his role as an independent agent. He is mistrustful of third-party interposition between himself and his patients and fearful of any arrangement that submerges his identity or that of his patient.

Medicine has shown that it isn't dedicated to horse-and-buggy practice, although it has been accused of this whenever resistance has been shown to changes that would reduce its role as the sole arbiter of what is best for patients.

Reasonable men must know that when a considerable number of physicians, who are mature, of good will, sensible and dedicated, become alarmed over the burgeoning role of the hospital in matters traditionally the responsibility of the profession, the situation deserves another look.

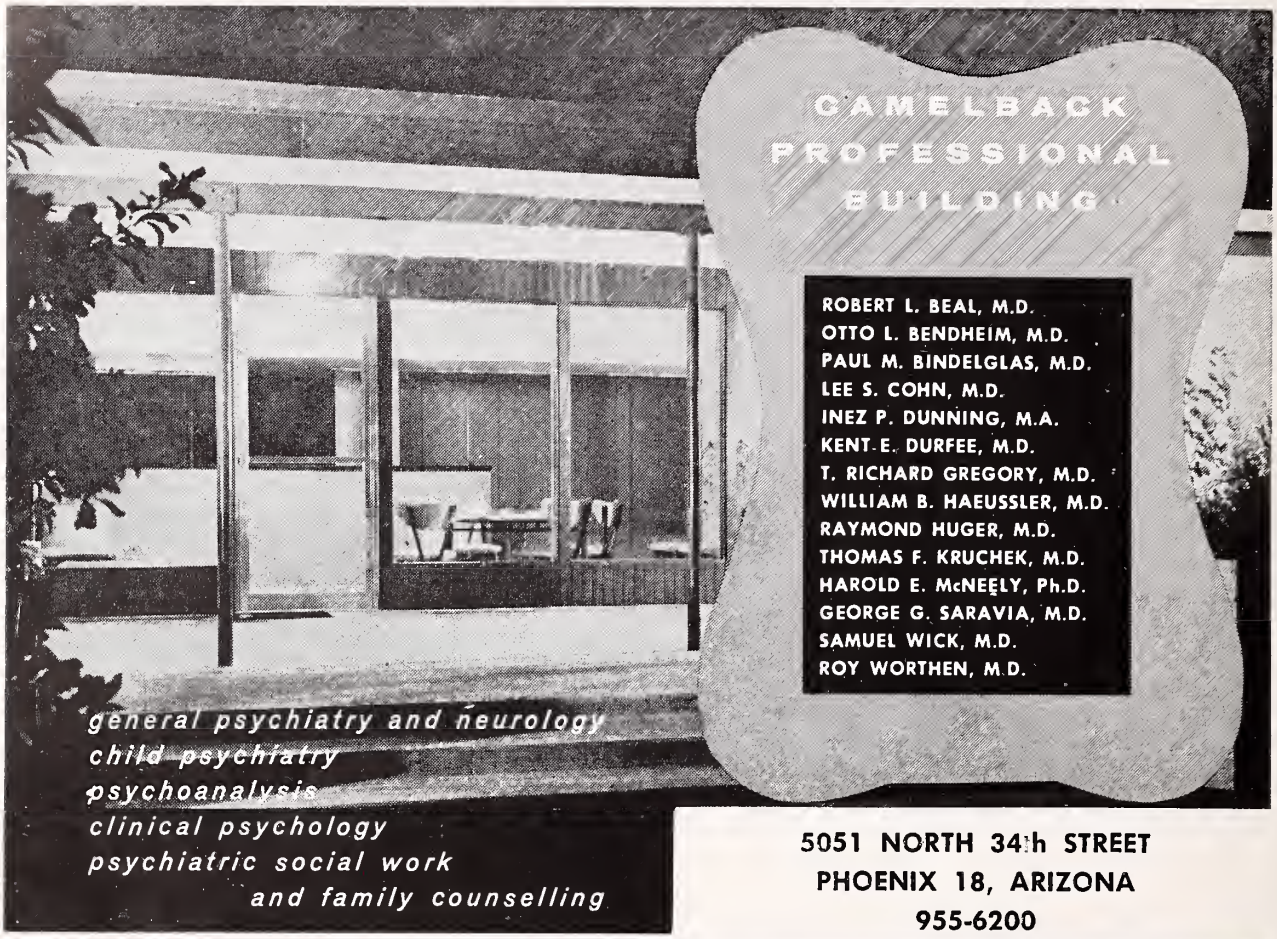
Certain changes looming on the horizon call for the hospital to be the purveyor of professional services. Plans in other states for employing full-time chiefs of each service alarm many of our members. The trend toward closed staffs, denial of privileges, less and less staff self-government, practice by edicts and "big brother" direction has been brought about in some areas of the country secondary to bed shortages and certain court decisions, plus the desire to "streamline and modernize" by central regulation.

In Arizona, the relationship between staff and trustees has generally been good. To insure that it continues to be good, assurance of a line of communication open at all times is necessary.

The House of Delegates, in its wisdom, adopted Resolution Number 15, which importunes hospitals to place an elected representative from the medical staff on the board of directors. His presence cannot cinch an issue or reject it, but if he is there by right and not by sufferance, the doctors will surely have the ear of the board.

Whether or not the Trustees will embrace this Resolution with the enthusiasm that it was passed by the doctors remains to be seen. Meanwhile, Dr. Melvin Kent's Hospital Liaison Committee will do its best to implement Resolution Number 15.

Paul B. Jarrett, M.D.



ROBERT L. BEAL, M.D.
OTTO L. BENDHEIM, M.D.
PAUL M. BINDELGLAS, M.D.
LEE S. COHN, M.D.
INEZ P. DUNNING, M.A.
KENT E. DURFEE, M.D.
T. RICHARD GREGORY, M.D.
WILLIAM B. HAEUSSLER, M.D.
RAYMOND HUGER, M.D.
THOMAS F. KRUCHEK, M.D.
HAROLD E. McNEELY, Ph.D.
GEORGE G. SARAVIA, M.D.
SAMUEL WICK, M.D.
ROY WORTHEN, M.D.

general psychiatry and neurology
child psychiatry
psychoanalysis
clinical psychology
psychiatric social work
and family counselling

5051 NORTH 34th STREET
PHOENIX 18, ARIZONA
955-6200

THE DIAGNOSTIC LABORATORY

Complete Medical Laboratory Service, X-Ray Diagnosis
Radiation Therapy, Radioactive Isotopes



PATHOLOGISTS
Maurice Rosenthal, M.D.
George Scharf, M.D.
Seymour B. Silverman, M.D.
Bland Giddings, M.D.
Sidney H. Zuber, M.D.

RADIOLOGISTS
1130 E. McDowell Office — 258-1601
Marcy L. Sussman, M.D.
1901 E. Thomas Road Office — 274-3603
Edward L. Batts, M.D.
William S. Stone, M.D.
George A. Gentner, M.D.

Diplomates of the American Boards of PATHOLOGY and RADIOLOGY

1901 East Thomas Road • Phoenix, Arizona • Phone 264-2101

ADMISSION TO MEDICAL SCHOOL

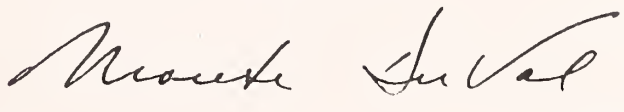
In college, the pre-medical student will usually have taken about 16 "hours" of work each semester. It takes 125 units of acceptable work to be eligible for a Bachelor's degree in Arts or Science. The medical school will consider admitting a student after he has approximately 100 hours of undergraduate work (i.e. after three years of college) but it would have to be for rather exceptional circumstances since, for every person who is accepted from this category, another (with a degree) must be turned down. In other words, the student with a Bachelor's degree has a definite advantage over the third-year student.

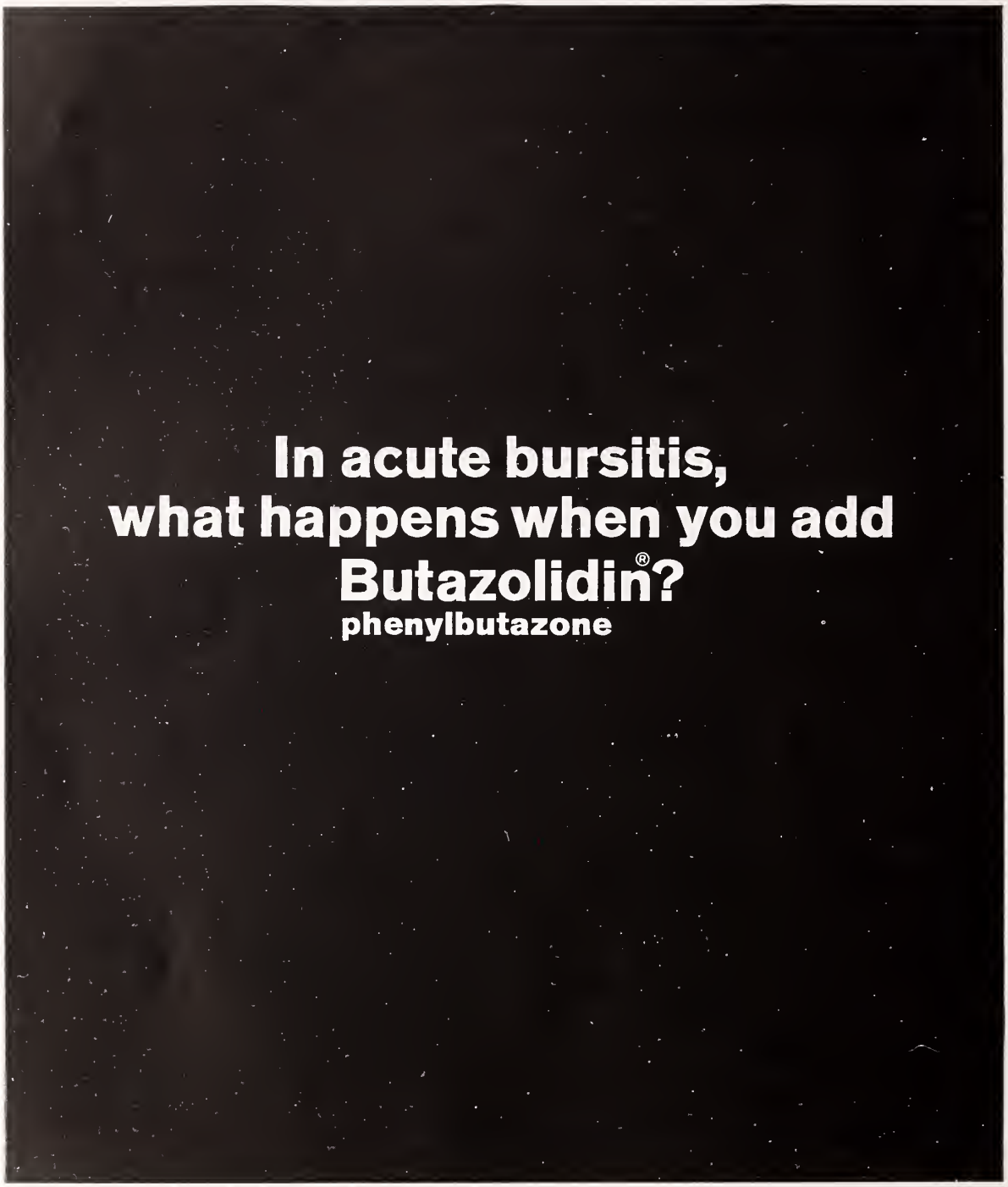
Included in the 125 hours are certain courses which are prescribed as "pre-medical." These courses may be "pre-" anything and are not exclusively pre-medical by any means. Furthermore, these pre-medical requirements only add up to approximately 38 hours of the total required. This is one of the reasons why one can, with rather good authority, urge a pre-medical student to emphasize work in other fields than biology, zoology and the pre-medical sciences. Indeed, he can earn his Bachelor's degree in arts just as well as in science and still be pre-medical.

The specific course requirements, in hours, are as follows: chemistry — 16 (eight each in inorganic and organic chemistry); physics — 8; general biology or zoology — 8 and English — 6. All but English must include laboratory experience. Naturally, such requirements as these are minimal. We usually encourage students to amplify their course selections, if they can, to include such material as analytical geometry and calculus, quantitative analysis, physical chemistry, genetics, psychology and social science. Then, when we evaluate the grades of the pre-medical student we determine a grade point average for those courses which are pre-medical as well as for the entire curriculum. Then we can make a judgment about performance based on what else the student was taking (and doing) in addition to taking the material which was required. In this regard, it is a mistake to lend encouragement to the rumor that a student should be essentially "all A's" or "all A's and B's" if he wants to try to get into medical school. Currently, approximately 14% of medical school freshmen had presented an "A" average in their college work and 76% presented a "B" average when they were picked.

All pre-medical students must take the Medical College Admission Test before their application is given final consideration by the admissions committee. Generally, this test is taken in the spring of the junior year in college although it is possible to take it the preceding fall or as late as the fall of the senior year. The scores achieved by the students on this test are, as might be expected, only of limited help in evaluating the applicant. Their principal value is predictive. That is, an applicant with a poor MCAT score will run a statistically greater chance of academic failure in medical school than will an applicant with a higher MCAT testing. On the other hand, after the first year and a half of medical school the majority of dropouts occur because of non-academic reasons. Therefore, admission committees have tended to use MCAT scores more or less as a predictive device relative to successful performance in the first year or two of medical school. They rely on other criteria to predict success beyond that time.

Briefly, character, integrity and motivation are considered by carefully reviewing the student's non-academic achievements, his letters of recommendation and support, and his standing among his peers. Then, he may be interviewed by an admissions team. This team is usually charged with the responsibility for getting to "know" the candidate sufficiently well that it can be the final interpreter of the candidate to the admissions committee itself. The admissions committtee is the final body of authority with respect to the success of the applicant in gaining admission to the medical school.





Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. Because of the increased possibility of toxic reactions, the drug should be used with greater care in the elderly and should not be given when the patient is senile or when other potent chemotherapeutic agents are given concurrently. Large doses of Butazolidin alka are contraindicated in patients with glaucoma.

Warning: If coumarin-type anticoagulants are given simultaneously, the physician should watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Patients receiving such concomitant therapy should be carefully observed for this effect. Use with caution in the first trimester of pregnancy.

Precautions: Before prescribing, the physician should obtain a detailed history and perform a complete physical and laboratory examination, including a blood count. The patient should be kept under close supervision and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools. Regular blood counts should be made to guard against blood dyscrasias.

Adverse Reactions: The most common adverse reactions are nausea, edema and drug rash. Moderately lowered red cell count may sometimes occur due to hemodilution. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. Infre-



quently, agranulocytosis, exfoliative dermatitis, Stevens-Johnson syndrome or a generalized allergic reaction may occur and require withdrawal of medication. Stomatitis, salivary gland enlargement, vertigo or languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia are also possible side effects.

Confusional states, hyperglycemia, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hepatitis, jaundice and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently.

Average Dosage: Initially, give 400 mg. daily (one tablet or capsule q.i.d.), reducing this, if possible, when a favorable therapeutic effect has been obtained. If after one week there has been no response, discontinue the drug.

For complete details, please refer to full prescribing information. 6509-V(B)

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York

BU-4513

Butazolidin® alka Geigy

Each capsule contains: Butazolidin®, phenylbutazone, 100 mg.; dried aluminum hydroxide gel, 100 mg.; magnesium trisilicate, 150 mg.; homatropine methylbromide, 1.25 mg.

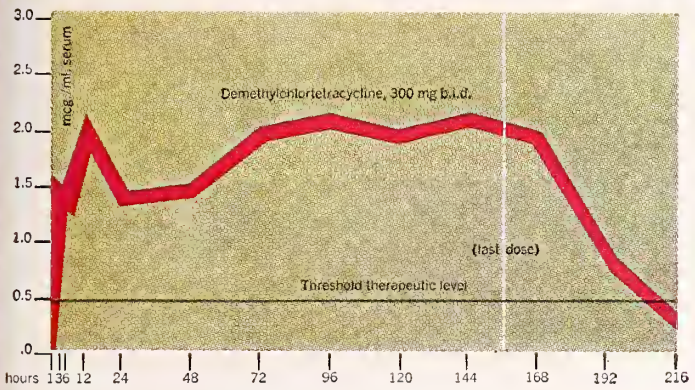


why wonder about a drug

when you know

DECLOMYCIN®
DEMETHYLCHLORTETRACYCLINE

provides high activity levels



high activity

From Sweeney, W. M.; Dornbush, A. C., and Hardy, S. M.; Amer. J. Med. Sci. 243:296 (Mar.) 1962

one 300 mg tablet b.i.d.
or
one 150 mg capsule q.i.d.

Effective in a wide range of everyday infections—respiratory, urinary tract and others—in the young and aged—the acutely or chronically ill—when the offending organisms are tetracycline-sensitive.

Contraindication—History of hypersensitivity to demethylchlortetracycline.

Warning—In renal impairment, usual doses may lead to excessive systemic accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort.

Precautions and Side Effects—Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. Use of demethylchlortetracycline during tooth development (last trimester of pregnancy, neonatal period and early childhood) may cause discoloration of the teeth (yellow-grey-brownish). This effect occurs mostly during long-term use but has also been observed in short treatment courses. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment. Side reactions include glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and dermatitis. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Anaphylactoid reactions have been reported.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products.

Capsules: 150 mg; *Tablets:* film coated, 300 mg, 150 mg, and 75 mg of demethylchlortetracycline HCl.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York

416-6-4074

Lederle



new from Ames
5 basic uro-analytical facts in 30 seconds

Labstix®

BRAND REAGENT STRIPS

...broadest urine screening possible from a single reagent strip

Urine test results with LABSTIX Reagent Strips can represent significant guides to differential diagnosis or therapy in many conditions. An unexpected "positive" may enable you to detect hidden pathology—long before more recognizable symptoms become evident. Negative results, which permit you to rule out abnormalities in a broad clinical range, can serve as baseline values for reference in future examinations. The 5 colorimetric test areas encompassed on LABSTIX Reagent Strips are:

pH—values are read numerically in the essential range of pH 5 to pH 9.

Protein—results are read either in the "plus" system or in mg. % in amounts approximating "trace," 30, 100, 300, and over 1000 mg. %.

Glucose—provides a "Yes-or-No" answer for urine "sugar spill."

Ketones—detects ketone bodies in urine—**both** acetoacetic acid and acetone. Reacts with as little as 5 to 10 mg. % of acetoacetic acid.

Occult Blood—specific test for intact red cells, hemoglobin or myoglobin. Results are read as negative, small, moderate or large amounts.

Now a Clear Reagent Strip of Firm Construction

...facilitates handling during testing procedure. Excellent color contrast made possible by the clear plastic strip, together with the clearly defined color charts provided, permits precise, reproducible colorimetric readings in all 5 test areas. A more definitive interpretation of uro-analytical facts is made possible.

Available: LABSTIX Reagent Strips, bottles of 100 (color charts are supplied with each bottle).

Ames Company, Inc., Elkhart, Indiana

AMES

08165

PRINCIPLES OF MEDICAL ETHICS

Roland F. Schoen, M.D.

Section 9: A physician may not reveal the confidences entrusted to him in the course of medical attendance, or the deficiencies he may observe in the character of patients, unless he is required to do so by law or unless it becomes necessary in order to protect the welfare of the individual or of the community.

Section 10: The honored ideals of the medical profession imply that the responsibilities of the physician extend not only to the individual, but also to society where these responsibilities deserve his interest and participation in activities which have the purpose of improving both the health and the well-being of the individual and the community.

Having become more than casually familiar with our Principles of Medical Ethics during the past six months, the 9th and 10th principles are not too great a surprise, nor do they require great analysis to be understood or accepted.

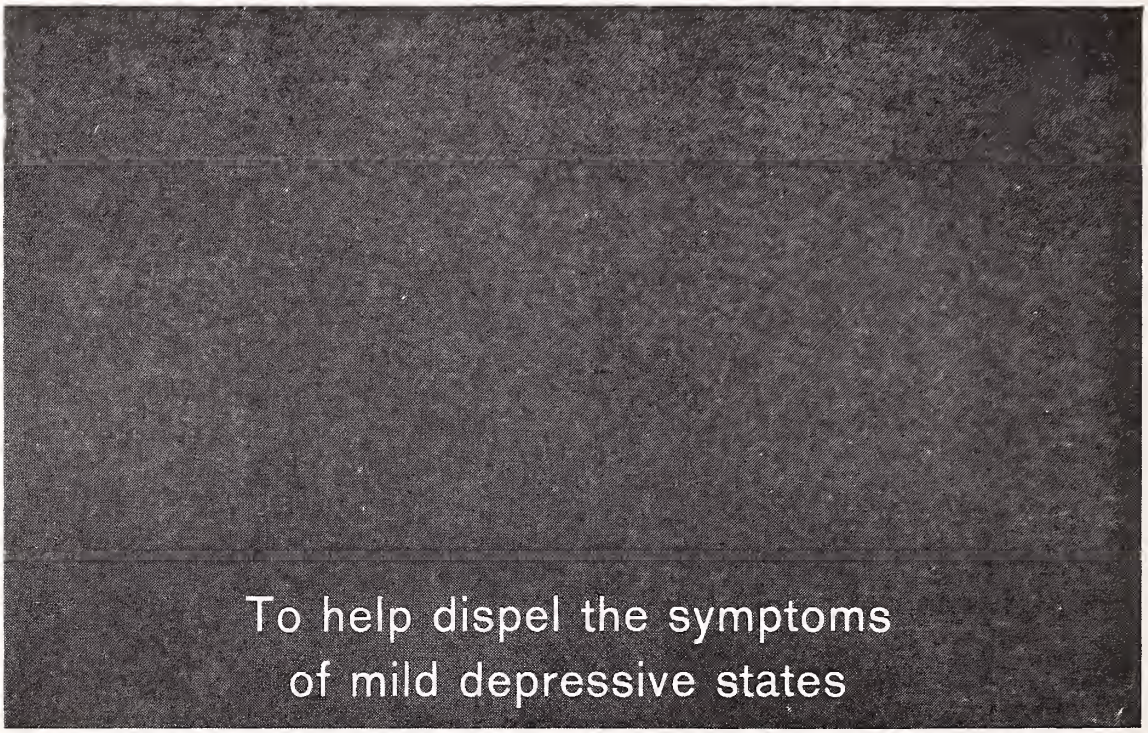
Section 9: None but members of the cloth are privy to more confidences from individual members of society than is the physician. In addition, the physician usually receives his confidences under conditions of acute mental or physical stress. Nowhere are the vicissitudes of both mind and body more readily bared. The physician, being the recipient of such unusual trusts, must make subsequent qualitative evaluation of them. This is a "privileged communication." If the communication is irrelevant, concerning merely the individual and being harmless to that individual, then the actual act of volunteering the information to the physician may be therapeutic in itself and should be of no more concern. Should this information, however, be detrimental not only to the individual volunteering it, but the community in which he lives, then the physician is required to act upon the information, but he must act with tact, discrimination and honor. Examples come readily to mind when one thinks of infectious diseases, grave illnesses, or unexplained trauma.

Analyze a little further. The physician's entire training is designed to develop evaluation and discrimination in both observation and judgment. However, the physician may not be both judge and jury, but he will evaluate a confidence as it is submitted, acting when legally required, but acting also for the ultimate benefit of both the individual and the community.

Section 10: Critical or qualitative analysis of this section is not only difficult but fairly superfluous. What else is there to say that has not already been said? There is some doubt in my mind as to whether we have not dealt lightly with the second word of the section; but the charges are quite clear. The section frees the physician from an individual role and projects him into the midst of a complex and integrated society where his responsibility exceeds that of the ordinary individual; the physician is charged not only with the usual responsibilities but in addition with those affecting both the health and the well being, not only of an individual but also of the community.

Permit the literary license of the following excerpts from the writings of a 16th century author with whom we are all familiar;

"Give thy thoughts no tongue,
Nor any unproportioned thought his act.
Be thou familiar, but by no means vulgar.
Those friends thou hast, and their adoption tried,
Grapple them to thy soul with hoops of steel.
Beware of entrance to a quarrel, but being in,
Bear't that the opposed may beware of thee.
Give every man thy ear, but few thy voice;
Take each man's censure, but reserve thy judgment.
This above all; to thine own self be true,
And it must follow, as the night the day,
Thou can'st not then be false to any man."



CONSIDER **DEXAMYL**® FIRST

brand of dextroamphetamine sulfate and amobarbital

Often within the hour, 'Dexamyl' works to help dispel such symptoms as apathy, pessimism, loss of interest and initiative, and lack of ability to concentrate.

Formulas: Each 'Dexamyl' Spansule® capsule (brand of sustained release capsule) No. 1 contains 10 mg. of Dexedrine® (brand of dextroamphetamine sulfate) and 1 gr. of amobarbital, derivative of barbituric acid [Warning, may be habit forming]. Each 'Dexamyl' *Spansule* capsule No. 2 contains 15 mg. of Dexedrine (brand of dextroamphetamine sulfate) and 1½ gr. of amobarbital [Warning, may be habit forming].

The following is a brief precautionary statement. Before prescribing, the physician should be familiar with the complete prescribing information in SK&F literature or *PDR*.

Precautions: Use with caution in patients hypersensitive to sympathomimetics or barbiturates and in coronary or cardiovascular disease or severe hypertension. Do not use in patients taking MAO inhibitors. Excessive use of the amphetamines by unstable individuals may result in a psychological dependence; in these instances, withdraw the medication. Use cautiously in pregnant patients, especially in the first trimester. *Side effects:* Insomnia, excitability and increased motor activity are infrequent and ordinarily mild.

SK&F SMITH KLINE & FRENCH LABORATORIES

SUNDAY NIGHT

William B. McGrath, M.D.

THERE sits my colleague. He has a stone in his heart. He wants me to take it out. No; not really. He knows very well that I can't. I guess he just wishes desperately for someone to know that it is there.

He is sorry now that he made the appointment; feels foolish taking up my time. All the sadness and confusion of Sunday night, when he called me, will surely sound like childish self-pity. Between him and me is the hard glint of my glasses. He cannot get through to me.

His instinct was right: It would be easier to talk to a stranger or to a woman.

Not to his wife, though. They have an unspoken pact not to recriminate. Each is vaguely aware of having been a disappointment to the other. Why bring up one's own and the other's sense of defeat and regret?

The stone doesn't budge. It won't dissolve in whiskey. It only gets stained in the smoke of his cigarettes. Every attempt to switch to a pipe has lasted no more than an hour. You could fill a ditch with the dry tobacco he has thrown away.

Sunday evening nobody stopped by. Company would have made all the difference in the world. People ought to visit more and not wait for an invitation. He should have 'phoned another couple. More truthfully, he should have asked his wife to do so. She would risk the awkward little hurt of their declining.

Or they could have gone to a friend's house. But the approach to any front door is strained, and he and his little brood always feel as conspicuous as if they were on stilts.

Anyway everyone else is probably busy. They've gone bowling or to a party. They're surely doing something!

Five hundred consecutive Sunday nights he has sat there. Heck, in that lifetime of wasted hours he could have learned to play the piano or violin. What a romantic figure he would have made, lonely and tragic.

Or at least he could have read the medical journals. Then he would have been a renowned physician with all kinds of impressive information at his fingertips. For the hundredth time he resolves to get a pocket-sized notebook in which to jot down the occasionally brilliant insights that occur to him while he is driving. But for the life of him he has never been able to come up with an original idea. And any published article looks more scholarly than he could hope to emulate, so he just feels stupid and inadequate. The student nurses in their little coveys do not even look up when he passes.

Sunday night. My beloved colleague played a symphony on the installment-purchased stereo. The whole thing sounded as if the musicians were still angrily tuning their instruments. It just grated on his nerves. How much did he put out for that reproachfully virginal set of Great Books? He read about four pages of philosophy; grasped its solipsisms as a woman clutches a billiard cue, without confidence or comprehension.

Four trips he made to the bathroom to blow his nose on Kleenex, twice missing the waste basket, and each time peering into the mirror,

hoping to find a black-head. Six times he wandered aimlessly to the front door and looked out the little window.

He has promised himself that he will not take a drink after supper. He could imagine doing entirely without alcohol if he had anything else to look forward to at the end of the day. They say that it takes fifteen years for a normal person to become an alcoholic. That's about right. Fifteen years ago the drink was not so essential a part of the evening's routine.

During those earlier times he must have been sleep-walking. Why didn't someone insist that he make intelligent plans for the future? Now it is too late. In his regular and itemized series of phony excuses for buying the new car, number eight — that it would be safer — didn't get a very enthusiastic reception at home or relieve his buyer's remorse.

His wife will outlive him, that's for sure. He used to phantasy going to her funeral — the lonely and tragic figure again. Afterwards every pitying young woman would come to comfort him. Each would go away with the heart warming memory of a perfect evening: the deodorant cologne, the music, the gentle conversation. He would not molest them or take advantage, as would all those lustful and more aggressive fellows.

No: he is not a seducer of women. He is too timid. He is the passive type, old ever-ready, old mistletoe, craving affection like a thirty-dollar vacuum sweeper, raging bitterly inside when no one ever takes the hint or volunteers.

He used to think that the years would dull the uneasy dissatisfaction or somehow soften the sharp edges of the stone in his heart. Everybody else seems uncomplicated and mature — and so effortlessly articulate.

Are they that much smarter than he is? Do they button their bill-folds in their hip pockets before the service station chap hands back their credit cards? Do they sit down in the front seat and then have to fish out the car keys in opisthotonos?

The other night at the meeting he had something to say. It felt as if his head were noticeably shaking and there was a tremor in his voice.

And when he was through nobody clapped. They just sat there. In the whole smug society there isn't a single person who looks up to him or really likes him. When he has his coronary he had better plan to be cremated. It would be mortifying for his wife not to be able to find six pall-bearers for his funeral.

No wonder he hasn't any friends. He has grown pusillanimous, weak and mean in spirit. He has had something critical to remark about everybody he knows. He is a back-biter and they have found him out. Ha! the snide and secret satisfaction of serving on the grievance committee, hearing about some other fellow's bad luck. He still cringes at that terrible phrase: conduct unbecoming a professional person. On the other hand when he has had an impulse to write a complimentary note to a colleague there haven't been any stamps in the desk at home.

He is a pathological liar, that's what he is. He is forever quoting himself, how he stood up to the authorities or cleverly demolished his adversaries, when in truth he was conciliatory and ingratiating. What sputtering rationalizations when he has made a mistake: it is everybody else's fault for hurrying him or withholding information.

He remembers supper. As always he bragged about his exploits, interrupted the children and whined at them. So far their forgiveness has seemed wonderfully ungrudging, but how long can it last? Away from them he has always resolved and rehearsed how to be more understanding so that they could bring their problems to him. Away from them he has felt suffused with tenderness. His heart goes out to them, but not his hand, except in a gruff and awkward ruffling of the hair. He has never been able to express his sentiments and he has certainly not permitted them to express theirs toward him.

Trying at last to shrug off the gloomy thoughts he went outside. But his stomach began to hurt again and the old disquiet wouldn't let him linger to look at the stars. And so to bed on Sunday night.



is beautiful, heated swimming pool highlights
the spacious lawn and recreation area at
Camelback Hospital. Other outdoor activities include
ley ball, ping pong, shuffleboard and badminton,
all under the supervision of a trained therapist.
Those preferring restful relaxation may enjoy
quiet conversation in the beautiful lawn and
grove area with its scenic mountain backdrop.

Camelback Hospital

5055 North 34th Street
955-6200
PHOENIX, ARIZONA
ARIZONA FOUNDATION FOR NEUROLOGY AND PSYCHIATRY
A Non-Profit Corporation

Located in the heart of the beautiful Phoenix citrus area near picturesque Camelback Mountain, the hospital is dedicated exclusively to the treatment of psychiatric and psychosomatic disorders, including alcoholism.

ROVED BY THE JOINT COMMISSION ON ACCREDITATION OF HOSPITALS; and THE AMERICAN PSYCHIATRIC ASSOCIATION



Preludin®
phenmetrazine
hydrochloride





helps keep calories at arm's length

In one double-blind program* involving diet, close doctor/patient cooperation, exercise, posture instruction, and follow-up visits, 93 obese patients received Preludin or a placebo. The drug and placebo were alternated every four weeks. This procedure lasted from 8 to 35 weeks.

Sixty-one percent of the patients lost more weight on Preludin than on placebo. In fact, they lost an average 1.9 pounds per week—almost four times as much as when they were on placebo!

For a decade Preludin has demonstrated similar results. Its effectiveness has been described in more than 300 published clinical reports involving more than 10,000 patients.

Preludin curbs appetite without excessive stimulation. It will work in your weight-control programs too.

*Barnes, R. H.: J.A.M.A. 166:898, 1958.

Preludin® tablets of 25 mg.
Endurets® prolonged-action tablets of 75 mg.
Dosage: One 25 mg. tablet two or three times daily, or one 75 mg. Endurets tablet once daily.
Contraindications: Severe coronary artery disease, hyperthyroidism, severe hypertension, nervous instability, and agitated prepsychotic states. Do not use with other CNS stimulants, including MAO inhibitors.
Warning: Do not use during the first trimester of pregnancy unless potential benefits outweigh possible risks.
Precautions: Use with caution in *moderate* hypertension and cardiac decompensation. Excessive use may result in a psychotic illness manifested by restlessness, mood or behavior changes, hallucinations, or delusions.
Side Effects: Dryness or unpleasant taste in the mouth, urticaria, and (rarely) overstimulation, insomnia, dizziness, nausea, or headache.

For details, see full Prescribing Information. 6544-III (B)

Under license from Boehringer Ingelheim G.m.b.H.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation, Ardsley, N.Y.

Soyalac

SOLVES THE PROBLEM

for the infant who requires a milk-free diet!



- Soyalac satisfies! Baby is happy, mother is grateful, doctor is gratified.
- The nut-like taste is pleasing. Infants readily accept this hypoallergenic formula that is completely fibre-free. An exclusive process results in a consistency much like milk.
- Soyalac is strikingly similar to mother's milk in composition and ease of assimilation. Clinical data furnish evidence of Soyalac's value in promoting normal growth and development.
- Excellent for regular infant feeding, too—and for growing children and adults.

Soyalac

Free Booklet and Samples

A request on your professional letterhead or prescription form will bring to you complete information and a supply of samples.

a product of

LOMA LINDA FOODS

MEDICAL PRODUCTS DIVISION

RIVERSIDE, CALIFORNIA

Mount Vernon, Ohio, U. S. A.

TO WHOM THIS MAY "CONCERN"

Dr. Jose David Ortiz Mariscal is a 23-year-old medical student in Guadalajara, Mexico. He attended the Congregational Mission School at Gigantes, outside of Guadalajara, before he went to the University to study medicine.

Our daughter, Laurie, met him in the summer of 1963 at the Gigantes Mission where she was working with 30 high school youngsters sponsored by the United Churches of Christ in Arizona.

Jose has been in the U. S. on two different occasions to observe and study medical practices and equipment in hospitals in Phoenix and Denver on his short vacations. He has been a guest in our home, and we found him to be a fine, bright, dedicated young man and most worthy of any help we might give him. He comes from a very large family and his parents are working hard to see that their children receive an education.

We received a special delivery letter written Sept. 29 by Jose from Guadalajara. The following is an excerpt from his letter:

"My work at the hospital is almost gone, next 30th I'll be finished my 5th year of medicine, and now I'm going to offer my Social Service to my country. I'll be for six months in a little town of 2,000 people called Ejutla, where there is no doctor, no drugs, no teacher, but me alone!

"Anyway there is electricity and water and that is something. I'll be working part of the day in a little 'hospital' of two rooms with 3 beds, a chaise lounge, and a table. So I have to take drugs, surgical instruments, etc., and everything bought with my money, which I don't have. I need about 2–3 thousand pesos (this is between $160-$240 in U. S. currency) that I would return before 6 months. Do you want to lend me some? My address from the 10th of October to the 30th of March will be:

Dr. Jose David Ortiz Mariscal
Centro de Salvo S.S.A.
Ejutla, Jalisco, Mexico

"I hope to receive a letter there because I will feel very lonesome there. I'll talk later how is the town and how they treat me. Pray for me and wish me luck. O. K. If you can't help, don't worry about it because I will go and do my best. Your friend, The Little Doctor Jose David."

Our physician, Dr. Bruce Clayton, has kindly offered to collect some medical supplies for Jose at his offices:

4909 N. 44th Street, Phoenix, Arizona.

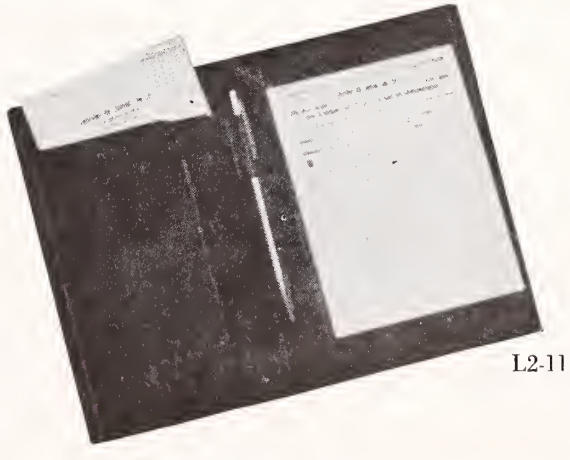
If you have anything you think José could use, you may leave them with him or call me and we will pick them up, or they may be mailed directly to José in Ejutla.

We are contacting our church mission board at Shepherd of the Hills Congregational Church and appealing to our church membership for any monetary help.

We pray that you will feel the same concern as we in helping José administer to the needs of his brothers who are also our brothers!

Gratefully yours,
Mr. & Mrs. Wm. H. Wallace
5633 E. Vernon Ave.
Scottsdale, Arizona
Phone: 946-0958

Doctor's Wallet



L2-11

Holds money, prescription pad, doctor's cards and his own pen or pencil in a finely crafted imported English Morocco case. BLACK OR BROWN.

$10.00 EACH—2 FOR $18.00

Add 50¢ Postage and Handling
NO C.O.D.

BENTLEY SALES
821 Market Street
San Francisco, Calif. 94103

How long will it take her to recover from her hip fracture if she just doesn't care?



Does she really care? Is she alert, encouraged, positive and optimistic about getting completely well soon?

Or has she given in to the demoralizing impact of confinement, disability and dependency?

When functional fatigue complicates convalescence, Alertonic can help...

Pleasant-tasting Alertonic is pipradrol hydrochloride—an effective cerebral stimulant whose gentle analeptic action helps counteract the apathy and inertia that can often delay convalescence—together with an excellent vitamin and mineral formula, in a satisfying 15% alcohol vehicle.

Nothing fosters confidence and a sense of well-being better than your own personal warmth, understanding and encouragement together with Alertonic to help insure prompt response.

Adequate dosage is important: Prescribe Alertonic—one tablespoonful t.i.d., 30 minutes before meals...tastes best chilled.

And for your patient's sake, prescribe Alertonic in the convenient, economical one-pint bottle.

Alertonic®

Available Only On Prescription

Each 45 cc. (3 tablespoonfuls) contains: alcohol, 15%; pipradrol hydrochloride, 2 mg.; thiamine hydrochloride (vitamin B_1) (10 MDR*), 10 mg.; riboflavin (vitamin B_2) (4 MDR), 5 mg.; pyridoxine hydrochloride (vitamin B_6), 1 mg.; niacinamide (5 MDR), 50 mg.; choline,† 100 mg.; inositol,† 100 mg.; calcium glycerophosphate, 100 mg. (supplies 2% MDR for calcium and for phosphorus) and 1 mg. each of the following: cobalt (as chloride), manganese (as sulfate), magnesium (as acetate), zinc (as acetate), and molybdenum (as ammonium molybdate).

*Multiple of adult Minimum Daily Requirement supplied.
†The need for these substances in human nutrition has not been established.

Indications: 1. Functional fatigue such as that often associated with: a depressing life experience or stressful time of life; advancing years; convalescence; limited activity or confinement. 2. Poor appetite and vitamin-mineral deficiency as they occur in: patients having faulty eating habits; geriatric patients who are losing interest in food; patients convalescing from debilitating illness or surgery.

Dosage: Adults, 1 tablespoonful; children (over 15 years old), 1 to 2 teaspoonfuls; children (4 to 15 years old), 1 teaspoonful. To be taken three times daily 30 minutes before meals.

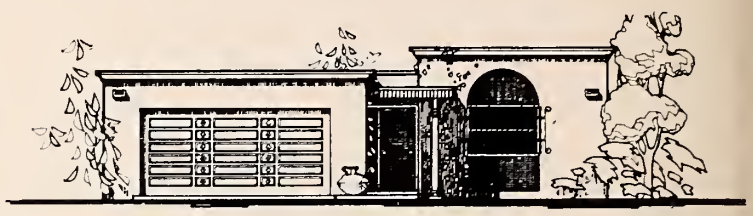
Contraindications: As with other drugs with CNS stimulating action, Alertonic is contraindicated in hyperactive, agitated or severely anxious patients and in chorea or obsessive compulsive states.

Side effects: Reports of overstimulation have been rare. Patients who are known to be unduly sensitive to the effects of stimulant drugs should be observed carefully in the initial stages of treatment.

Merrell

THE WM. S. MERRELL COMPANY
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

A Special Offering On The 2 Remaining Models At Sutton Place



Lot 9

2614 EAST OSBORN RD.

PLAN A/2

Selling Price $31,500.00

(Includes: Carpeting, Drapes, Sprinkler System, Landscaping)

Down Payment, 20% $ 6,300.00

Mortgage Payable, $218.00 per month $25,200.00



Lot 10

2618 EAST OSBORN RD.

PLAN A/3

Selling Price $32,200.00

(Including: Fireplace, Carpets/Draperies, Sprinklers, Landscaping)

Down Payment, 20% $ 6,500.00

Mortgage Payable, $222.00 per month $25,700.00

Dell Trailor now offers these beautiful Sutton Place Townhouses, with all the luxuries built-in. Your golden opportunity to move in before the holidays. Special financing can be arranged if you qualify for one of these Gold Key models.

Contact: **Jan Ormsby**
277-9554

or Call
Dell Trailor Construction Company
279-6206



SENATE BILL 275 AND MEDICARE

1. Senate Bill 275 — Medical Assistance to the Aged, which was passed recently by the Arizona Legislature, supplements the Federal Medicare legislation through provisions for payment of the $3 monthly premium under Part B of Title XVIII (Medical Insurance) and some of the deductible cost under Part A (Hospital Insurance) for certain groups of the indigent aged population (65 years and over) in Arizona.

a. Payment of $3 monthly premium for welfare (money) recipients. There are in Arizona, approximately 14,500 persons 65 years of age and over, who are receiving welfare payments (Old Age Assistance, Aid to the Blind or other welfare payments). The State Welfare Department has now entered into an agreement with the Social Security Administration to pay the monthly premium under Part B of Medicare for this group. The State will then be reimbursed by each county for the number of welfare recipients residing in that county.

b. Payment of $3 monthly premium for the medically indigents. Contrary to the welfare recipients, the medically indigents are not known to the Welfare Department or other governmental agencies. Senate Bill 275 defines the medically indigents eligible for benefits under this act as persons 65 years of age and over who are:

(1) Residing in Arizona.

(2) *Not* receiving welfare payments.

(3) Have an income not more than $1800 annually for a single person or $2400 annually for a married couple.

(4) Who do not have other possessions but personal effects, a home of up to $10,000 value, an automobile worth $750 and a burial plot.

The Social Security Administration, in cooperation with the State Welfare Department, will attempt to contact all eligible persons who have not yet signed up for Part B of Medicare and will assist the Welfare Department in the screening of those eligible for payments of the $3 monthly premium. (Note: Medically indigents who receive Social Security will not be eligible for payment of premium under Part B, but will be eligible for payments of deductibles under Part A of Title XVIII — see next paragraph).

c. Payment of deductible cost under Title XVIII, Part A for *medically indigents*. All medically indigents (not welfare recipients) will be eligible for payment of:

(1) $40 deductible for each hospital stay.

(2) $20 deductible for hospital out-patient diagnostic services.

2. Impact of Medicare and SB 275 on counties. Medicare and the Medical Assistance Program will mean a substantial saving for each county in their responsibility of caring for its elderly indigent patients. This may best be illustrated by some examples:

EXAMPLE 1a. A welfare recipient of X county which does not have a county hospital, is admitted to a private hospital for surgery. The hospital stay was 15 days.

Total Cost: 15 days hospitalization at $45 per day (includes all hospital services)		$675.00
Physician's fee		325.00
Total Cost:		$1000.00
X County will pay:		
Title 18 A: Deductible hospital cost		40.00
Title 18 B: Deductible cost (annual)		50.00
Plus 20% of remaining physician's fee		55.00
Total County payments:		$ 145.00
The County will save	$855.00	

EXAMPLE 1b. If the patient was a *medical indigent* — not a welfare recipient — the State Department of Health would pay the $40 deductible under SB 275. If the county was responsible for the patient's care, the county would pay the remaining $105; if not, the patient would be responsible for this payment to his physician.

EXAMPLE 2. If the same welfare patient was living in Y County and admitted to Y County Hospital, that hospital would be reimbursed by Medicare for the cost of the patient's hospital stay minus the $40 deductible.

EXAMPLE 3. X County has a contract with

a nursing home for Welfare patients, paying $10 per day. The cost for 100 days' stay would thus be $1000. Under Medicare the County will pay the deductible cost of $5 per day from 20th to 100th day, or $400, thus saving $600.

3. Impact of Medicare and SB 275 on providers of service, (hospitals, nursing homes and home health agencies).

Hospitals, nursing homes and home health agencies will be reimbursed by Medicare for a number of patients which they formerly would have carried as charity cases. Furthermore, Medicare will pay the actual cost of caring for patients including the cost of needed improvements of the facilities and services, and such institutions will not have to accept a fixed fee agreement which will not actually cover their cost.

NOTE: While Medicare (Title XVIII) will pay reimbursable cost to a county hospital which meets the standards for certification, Title XIX of the Social Security Amendments specifically excludes "charity hospitals" from payment. Since Title XIX, when fully implemented by 1975, will pay all cost for almost all indigents or medically indigents in private hospitals, there will be *little or no need for county hospitals by that time* (if Title XIX is implemented by Arizona legislation prior to 1970).

(To illustrate this point, it may be mentioned that most county hospitals in California already have been turned over to non-profit organizations to be administered as community hospitals.)

4. *All patients* 65 years of age and over will be free to seek their private physicians and choose any hospital or nursing home which is certified as a provider of service. Patients may choose to pay their own deductibles or may obtain a low-cost insurance (less than $5 per month) to pay the deductible cost under Part A. State or county may pay the deductible cost for welfare recipients and medically indigents, as explained in the foregoing.

5. The practicing physicians will now be able to treat all patients eligible for Medicare and admit them to hospitals and nursing homes without regard to their medical indigency, and after the first $50 deductible cost has been met, the physician will receive 80% of his usual and customary fee from Medicare. The physician will have a choice of billing the patient directly for the total cost of his services, in which case he will have no dealing with Medicare or the fiscal intermediary, or he can bill the patient for his part only and accept the remaining 80% of his bill directly from the fiscal intermediary. In the case of indigent patients, the county may pay the $50 deductible and the 20% co-insurance cost.

ArMA GRANTS SEVEN SCHOLARSHIPS

Dr. Daniel T. Cloud, Chairman of the Association's Benevolent and Loan Fund Committee, announced the winners of the annual Medical Student Scholarships.

The scholarships, each for five hundred dollars, were awarded to: Roy W. Buterbaugh of Tempe, a graduate of ASU who will attend the University of Colorado Medical School; J. William Fitz of Tucson, a graduate of the U of A to attend the University of New Mexico; Timothy J. Hurley of Tucson, a graduate of U of A who will attend the University of California School of Medicine at San Francisco; Robert Lawrence of Tucson, a graduate of U of A attending the University of New Mexico; Hollis Phillips of Douglas, a graduate of U of A who will attend Baylor University School of Medicine; Cyril James Statt of Phoenix, a graduate of Boston College attending New York State University School of Medicine; and Dave Leroy Stevig of Phoenix, a graduate of the University of Southern California who will attend Northwestern University Medical School.

This brings to 15 the number of $500.00 scholarships granted by the Association since the scholarship program started in 1964.

Dr. Cloud predicted that the program will undoubtedly grow when the new Medical School at the University of Arizona opens its doors in the fall of 1967.

YUMA SUPERVISORS TAP HEALTH OFFICIALS TO OPERATE PROGRAM FOR MEDICALLY INDIGENT

The Yuma County Board of Supervisors has named the county health director, Dr. Joseph Pinto, to administer the medical eare program for the county's indigent and medically indigent persons.

In a resolution dated September 20, the Board stated it considers medical eare of the indigent and medieally indigent as an integral part of public health, and considers the medical director of the Yuma County Health Department a health officer, a county physician and an employee of the county, with responsibility for directing county health programs.

As such, the Supervisors added, the health officer is directly responsible to the Board of Supervisors through the Board of Health and should act as liaison, in health matters, between the county and nursing homes, extended care facilities, hospitals, the medical society and other groups.

This marks the first time in Arizona that medical care of indigents and medical indigents has been made a responsibility of local public health officials. Approval of the new system has come from a number of sources.

The Yuma County Medical Society supports the plan because it provides medical leadership for a medical program, and is a means of providing quality medical care to those who might be unable to pay for it.

The Society's president, Dr. James Volpe, Jr., said:

"The Yuma County Board of Supervisors have proved themselves farsighted community leaders. Doctor Pinto and the County Board of Health are to be commended for the support and assistance they provided in the blueprinting of the new approach to giving needed medical care to our county's indigent and medically indigent citizens."

The chairman of the Yuma County Board of Health, Dr. Robert Stratton, also praised the program.

"The Board of Supervisors and Doctor Pinto have shown a sincere interest in the health of the people of this county," he said. "We are proud to be a part of this program, and we appreciate the participation of all who have made this possible."

State Health Commissioner George A. Spendlove commended the Yuma County Board of Supervisors and the other officials who cooperated in planning the new program. He said the State Department of Health is watching the program with interest and anticipation.

TEST YOUR MEDICAL ETHICS I.Q.

Question: May I, as a patient's attending physician, discuss patient's history, diagnosis, treatment, prognosis, etc., with patient's attorney?

Answer: Yes, with the consent of the patient. The Principles of Medical Ethics recognize in Section 10 that the physician has obligations to society as a whole in addition to his obligations to his patient as an individual. In many instances, the peculiar knowledge and attainments of the physician are indispensable to patients or others in the administration of business and government and in the usual conduct of certain daily affairs. When this knowledge, acquired during the course of the physician-patient relationship, is necessary to enable the patient to obtain his just due the physician should make it available for patient's benefit under proper conditions. Discussion with or report to the patient's attorney may be proper and necessary in order for patient to perfect a claim. The attending physician may ethically discuss patient's history, etc. with the attorney providing, of course, patient has consented to the discussion.

Question: Is it ethical to have another doctor perform surgery on my patient without patient's knowledge and consent?

Answer: No. The Principles in Section 2 state that the principal objective of the medical profession is to render service to humanity with full respect for the dignity of man. To have another physician operate on one's patient without that patient's consent, and without his knowledge of the substitution, is a fraud and deceit and a violation of a basic ethical concept. The patient as a human being is entitled to choose his own physician and he should be permitted to acquiesce in or refuse to accept the substitution.

A statement, prepared by the Law Department, is reproduced here as being educational on this matter.

The surgeon's obligation to the patient requires him to perform the surgical operation: (1) within the scope of authority granted him by the consent to the operation; (2) in accordance with the terms of the contractual relationship; (3) with complete disclosure of all facts relevant to the need and the performance of the operation; and (4) to utilize his best skill in performing the operation.

It should be noted that it is the operating surgeon to whom the patient grants his consent to perform the operation. The patient is entitled to the services of the particular surgeon with whom he contracts. The surgeon in accepting the patient obligates himself to utilize his personal talents in the performance of the operation to the extent required by the agreement, creating the physician-patient relation. He cannot properly delegate to another the duties which he is required to perform personally.

Under the normal and customary arrangement with private patients, and with reference to the usual form of consent to operation, the surgeon is obligated to perform the operation himself, and he may use the services of assisting residents or other assisting surgeons to the extent that the operation reasonably requires the employment of such assistance. If a resident or other physician is to perform the operation under the guidance of the surgeon, it is necessary to make a full disclosure of this fact to the patient, and this should be evidenced by an appropriate statement contained in the consent.

If the surgeon employed merely assists the resident or other physician in performing the operation, it is the resident or other physician who becomes the operating surgeon. If the patient is not informed as to the identity of the operating surgeon, the situation is "ghost surgery."

An operating surgeon is construed to be a performing surgeon. As such his duties and responsibilities go beyond mere direction, supervision, guidance, or minor participation.

He is not employed merely to supervise the operation. He is employed to perform the operation. He can properly utilize the services of an assistant to assist him in the performance of the operation. But he is not performing the operation where his active participation consists of guidance or standby responsibilities in the case of an emergency.

Question: A "fee complaint" committee of a county medical society has asked whether the second sentence of section 7 of the Principles of Medical Ethics specifically authorizes a physician to double his fee if the patient's income is twice that of the average person or whether it means that when a patient's income is less than average the fee should be reduced.

Opinion: The Principles of Medical Ethics are "standards by which a physician may determine

the propriety of his conduct." They are guides to be observed, not laws to be enforced. The second sentence of section 7, providing that a physician's "fee should be commensurate with the services rendered and the patient's ability to pay" is such a guide. It is a general principle which should aid the physician in considering his fee. In addition to legal prohibitions, the very nature of medical practice prevents the rigid establishment of inflexible fees for the many services which may be rendered to any individual. This principle does not suggest, therefore, that a physician set his fee with mathematical accuracy nor does it impose on him an obligation to act contrary to conscience, reason, or experience.

In the opinion of the Council, "commensurate with the services rendered" recognizes that although there are some services which are considered invaluable, nonetheless their practical value lies within a range, – within limits above or below which a fee is unconscionable. In the opinion of the Council a "patient's ability to pay" is a secondary factor, one to be considered after, not before, value "commensurate with the services rendered" is ascertained. In the further opinion of the Council it is not contrary to conscience for the physician to consider the patient's ability to pay if he fixes his particular fee within reasonable limits. The language used in this section is intended only to suggest that a physcian try, in matters relating to fees, to the best of his ability to insure justice to the patient and himself and respect for his profession.

In the opinion of the Council, this section cannot properly be interpreted to mean that a physician or a group of physicians must fix average fees to be increased or reduced according to the patient's economic status, nor to imply that an arbitrary sliding scale of fees is to be adopted and applied individually or by the profession. It may not be used to justify an excessively high fee or to apprve an inadequately low fee.

The Council feels this subject important enough to add the comment that the physician can obviate many fee-complaints (and consequent ill-will) by discussing fees with his patient so that the patient may understand and appreciate the value of the service for which the fee is paid.

Question: Is it ethical for a physician to indicate on his letter or billhead, or his professional cards, that he is a member or fellow or diplomate of some specialty organization within the medical profession?

Answer: The physician should limit the use of statements of qualifications and honors on letter and billheads and professional cards to the simple, dignified abbreviation, "M.D." or the statement "Doctor of Medicine." To do more smacks of self-laudation, borders on solicitation of patients, and tends to reduce the degree and title "Doctor of Medicine" to secondary importance. While it cannot be concluded that it is unethical to use specialty designations in this manner, it can be said that the practice is not in the best of taste or in the best interest of the profession.

Question: At my hospital we have neither interns nor residents to assist during surgery. The custom is for the surgeon to call in either the referring physician or another physician to assist him during surgery. May the surgeon ethically bill the patient for the total surgical charge and then reimburse the assistant personally out of the payment received from the patient?

Answer: When two or more physicians actually and in person render services to one patient they should render separate bills. It is contrary to the traditions of the Association and spirit of the Principles for the surgeon to bill for the total surgical procedure and pay an assistant from the amount so received. The practice fails to impress patient with the gravity of surgical care – which is not a one-man procedure – and it tends to make the surgical fee appear disproportionately high.

The Judicial Council suggests, in the best interest of the profession, that the patient be fully advised of the need for an assistant, and told that this is necessary in his own best interest. The patient should also be advised that the assistant will earn and charge a fee for his services and will send a bill for his services direct to the patient, which the patient should pay to the assistant.

Question: Is it ethical to render a combined bill to a patient if the names of all participating physicians (or surgeons) and their respective fees are set forth?

Answer: The Judicial Council has stated repeatedly (in its June 1954 Special Report and its December 1952 Annual Report, to cite two occasions) that, when two or more physicians actually and in person render service to one patient, they should render separate bills. The Special Report of June 1954 indicates two exceptions to this general rule, namely, when a patient insists on a single bill or when an insurance company demands one. The Council has insisted, however, that these instances are to be recognized as exceptional cases and not routine.

Question: Is it ethical to disclose history, diagnosis, prognosis, etc., during the physician-patient relationship concerning my patient to an insurance company's representative?

Answer: Yes, if patient has consented to the disclosure. As recognized in Section 10 of the Principles a physician's responsibilities to his patient are not limited to the actual practice of medicine. They also include the performance of some services ancillary to the practice of medicine. These services might include certification that patient was under the physician's care and comment on the diagnosis and therapy in the particular case.

Question: Please define "ghost" surgery.

Answer: The Judicial Council, in its 1954 Annual Report, stated that it does not believe it appropriate to define expressions not found in the Principles themselves which, in popular usage, connote ethical or unethical conduct. The Council points out that the Principles themselves are the criteria by which the ethical nature of professional conduct is determined: Whenever it becomes necessary to evaluate the ethical quality of any particular act, reference must be made to the Principles themselves — not to definitions or descriptions.

The above answers are the opinions of the Judicial Council of the A.M.A. who has authorized their publication.

The Professional Way



Your Savings Can Earn More at First National Bank With 4% per year DAILY INTEREST

A typical example: An original deposit of $1,000 is made on the first day of the month in your savings account. On the 16th day, $900 is withdrawn for 2 days (leaving a balance of $100) and then $900 is redeposited on the 18th and left on deposit until the 30th.

WITH FIRST NATIONAL BANK DAILY INTEREST:

You earn full interest on the $1,000 for 15 days	$1.64
You earn interest on the $100 balance for 2 days	.02
You earn interest on the $1,000 for the last 13 days	$1.43
Total Interest Earned at First National for 30 days	$3.09

OTHER STATEWIDE BANKS PAY INTEREST ON LOW MONTHLY BALANCE

You lose interest on $900 of the $1,000 for the entire 30 days.

You earn interest on ONLY $100 for the 30 days or 33¢

First National Bank is the only statewide bank in Arizona paying DAILY INTEREST.

1st FIRST NATIONAL BANK OF ARIZONA

Each deposit account at First National Bank is insured up to $15,000 by F.D.I.C.

MEMBER F.D.I.C. • FEDERAL RESERVE SYSTEM

EXPANSION OF THE DEPENDENTS' MEDICAL CARE PROGRAM

EFFECTIVE DATE —

October 1, 1966.

WHO IS ELIGIBLE? —

The wife and unmarried dependent children of *ACTIVE* duty personnel.

DEDUCTIBLE —

The new law eliminates the previous requirement that the patient pay the first $15.00 of the physicians charges for treatment of a bodily injury on an outpatient basis. Instead, for all outpatient care regardless of source, the patient is now required to pay a deductible of $50.00 per fiscal year (July 1 to June 30); however for a family no more than two deductibles ($100.00) are required. Once the deductible is satisfied the patient must then pay 20% of the charges.

OUTPATIENT SERVICES AUTHORIZED —

Authorized outpatient services include but are not limited to:

A. Treatment of:
 1. Medical and surgical conditions.
 2. Nervous and mental disorders
 3. Chronic conditions and diseases
 4. Contagious diseases.
 5. Bodily injury

B. Maternity and infant care when delivery is outside a hospital, or when the patient is not otherwise hospitalized for proper management of the pregnancy.

C. Diagnostic examinations, including x-ray, laboratory, basal metabolism, electrocardiogram, electroencephalogram, and radioisotope examinations.

D. Anesthetics and their administration.

E. Oxygen and equipment for its administration.

F. Physical therapy.

G. Orthopedic braces (except orthopedic shoes) and crutches.

H. Dental care required as a necessary adjunct to medical or surgical treatment.

I. Local ambulance service to or from a hospital for the purpose of receiving inpatient care or outpatient accident care.

J. Drugs and medications limited to:
 1. Drugs and medications obtainable only by written prescriptions.
 2. Insulin

K. Artificial limbs and artificial eyes, including initial issue and fitting, replacement, repair, and adjustment.

L. Durable equpment such as wheelchairs, iron lungs, and hospital beds, on a *rental basis.*

M. Routine physical examinations and immunizations may be provided only when required by spouses and children who are under orders to travel outside the United States as a result of a members duty assignment.

MILITARY AUTHORIZATION —

Dependents *shall not* be required to obtain a Nonavailability Statement to seek *outpatient* care from civilian sources.

PROFESSIONAL SERVICES —

The services of professional personnel are authorized on an outpatient basis as follows:

a. Physician services.
b. Services of Christian Science practitioners.
c. Services of private-duty nurses when ordered by the attending physician or Christian Science practitioner.
d. Services of allied scientists when ordered by the attending physician.

OUTPATIENT SERVICES NOT AUTHORIZED —

The following outpatient services are excluded:

a. Routine physical examinations and immunizations except in the case of spouses and children on orders to travel outside the United States.
b. Routine care of newborn and well-baby care.
c. Eyeglasses or examinations for them.

d. Prosthetic devices (other than artificial limbs and artificial eyes), hearing aids, and orthopedic shoes.

e. Dental care except as a necessary adjunct to medical or surgical treatment.

PROCEDURE FOR SUBMITTING AN OUTPATIENT CLAIM –

a. Each individual or family group will pay the source of outpatient services directly until the annual deductible is satisfied.

b. Receipted bills should be obtained for all payments. They should indicate:
 1. Name of the patient
 2. Date services were provided
 3. Type of service
 4. Amount paid
 5. Signature of the source of care

 CASH REGISTER RECEIPTS ARE NOT ACCEPTABLE

c. The Fiscal Administrator reimbursing the patient will provide a certificate indicating that the deductible has been satisfied for the fiscal year in question.

d. Claims for outpatient care obtained in the United States and Puerto Rico will be submitted to the Fiscal Administrator in the state where the claimant resides.

CLAIM FORM –

The present 1863-1 or 1863-2 form will be used until such time a new form is devised for outpatient care.

INPATIENT HOSPITAL SERVICE –

There has been no change in either the policy or procedure in effect prior to October 1, and as set forth in the Dependents' Medical Care Manuals, in terms of identification and eligibility, care authorized, patient liability, or billing and payment with respect to hospital care and inpatient services of independent para-medical personnel.

OUTPATIENT HOSPITAL SERVICE –

The information pertaining to outpatient care is no longer applicable. The new regulations governing the determination as to whether services rendered constitute inpatient or outpatient care is as follows:

1. DIAGNOSTIC AND THERAPEUTIC SERVICES when directly related to a bodily injury or surgical condition for which a dependent has been or must be admitted as an inpatient shall be considered as an integral part of the inpatient care. This care must be within 30 days prior or 120 days after inpatient care.

2. DIAGNOSTIC AND THERAPEUTIC SERVICES when directly related to any admission of an obstetrical patient in connection with the same pregnancy including direct complications prior to and/or after a miscarriage or delivery, shall be considered as an integral part of inpatient care.

3. RADIATION THERAPY AND RELATED DIAGNOSTIC TESTS AND PROCEDURES when rendered prior to and/or after an inpatient admission, and certified as directly related to the surgical procedure performed during the hospitalization, shall be considered as inpatient care. No time limit is specified.

4. EMERGENCY ROOM SERVICES that are followed immediately thereafter by a formal admission of the dependent as a bed patient, to the same or different hospital, shall be considered as an integral part of the inpatient care.

IF THERE IS NO RELATED INPATIENT CARE IN ANY OF THE ABOVE INSTANCES SUCH SERVICES SHALL BE CONSIDERED AS OUTPATIENT CARE.

5. SERVICES OF PARA-MEDICAL PERSONNEL such as independent anesthetists, physiotherapists, etc. in the outpatient department or emergency room shall be considered as outpatient care.

GENERAL PRINCIPLES –

The following principles and procedures should be observed with respect to outpatient claims submitted to Blue Cross for payment:

a. Outpatient care should be billed separately from the related inpatient care. One or more DA Forms 1863 may be required, dependent upon the amount and kinds of services rendered during each outpatient visit and the time interval between visits.

b. Hospitals may and should submit consolidated billings, whenever feasible. The services rendered, corresponding charges, and dates of outpatient service should be shown on the DA Form 1863 or identified on an attachment thereto.

c. The DA Forms 1863 reflecting pre-hospitalization tests and procedures will not be accepted for payment unless accompanied by the DA Form 1863 for in-hospital care.

d. The DA Forms 1863 reflecting post-hospitalization tests and procedures should be submitted separate from the inpatient billing, to preclude delayed payment of the latter.

e. Each DA Form 1863 reflecting outpatient services must be complete and otherwise acceptable in terms of the required information and certifications, and as set forth below.

Item 15 — Check "outpatient" whether the services were rendered by a hospital or other sources.

Item 16 — Check "a complete billing" for consolidated or separate billings.

Item 19 — The "from" and "to" dates should be the same for individual billings — they should reflect the first and last dates of service on consolidated billings.

Item 26 — Should indicate the admission and discharge dates of the related inpatient hospitalization — on claims reflecting pre- and post-hospitalization outpatient service.

Item 27 — Need not be completed, other than the entry "See attached billing," when such an attachment reflects the services rendered, charges, and dates of service.

Items 28 & 30 — Should reflect total charges and amount payable by Blue Cross.

Item 32 — In every instance of a billing to Blue Cross the words "Services are directly related to an inhospital admission" must be entered in the space provided, and this certification executed by a signature of the attending physician or dentist. When indicated, other blocks should be checked to reflect a service ordered by the physician or dentist.

Item 33 — Each DA Form 1863 must be signed by a representative of the hospital, or other purveyor of services as indicated by a check in one of the boxes preceding the certification.

Services rendered by podiatrists and psychologists are payable only when ordered by the attending physician or dentist (Item 32) and billed by the hospital.

REMINDER

AESCULAPIUS AWARD

PROGRAM

OPEN TO MEMBERS OF THE

ASSOCIATION

AND

ALL INTERNS AND RESIDENTS

Winner will be presented with a

plaque and cash award of $200.00

SEE PAGE 980

FOR APPLICATION FORM


only one in the morning
and one in the evening

Now b.i.d. convenience plus even greater patient savings over q.i.d. tetracycline therapy

(plus all the advantages of tetracycline phosphate complex)

new Tetrex® bidCAPS*

(tetracycline phosphate complex)

Maximum patient savings. New bidCAPS now enable you to prescribe tetracycline in an even more economical, more convenient form. Your patient's prescription dollar gets maximum value: a daily bidCAPS dose is priced lower than any other leading brand of tetracycline—b.i.d. or q.i.d.

Well tolerated. Tetrex (tetracycline phosphate complex) is well tolerated. Gastrointestinal side effects are few; photodynamic reactions are extremely rare.

More of the active antibiotic in the blood. The basic tetracycline in Tetrex (tetracycline phosphate complex) is less bound to serum protein than is demethylchlortetracycline.[1] Result: Tetrex (tetracycline phosphate complex) provides a higher percentage of active antibiotic in the blood.

Available in bottles of 16 and 50.

BRISTOL

BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York

BRISTOL THERAPEUTIC SUMMARY: For complete information consult Official Package Circular. *Indications:* Infections of respiratory, gastrointestinal and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms. *Contraindications:* The drug is contraindicated in individuals hypersensitive to tetracycline. *Warnings:* Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood). *Precautions:* Mycotic or bacterial superinfection may occur. Infants may develop increased intracranial pressure with bulging fontanels. In gonorrheal therapy, serologic tests for syphilis should be conducted initially and monthly for 3 months. *Adverse Reactions:* Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis and allergic reactions may occur. *Usual Adult Dose:* 500 mg. b.i.d. Continue therapy for 10 days in beta-hemolytic streptococcal infections. Administer one hour before or two hours after meals.

Reference: 1. Roberts, C. E., Jr.; Perry, D. M.; Kuharic, H. A., and Kirby, W. M. M.: A. M. A. Arch. Int. Med. 107:204 (Feb.) 1961.

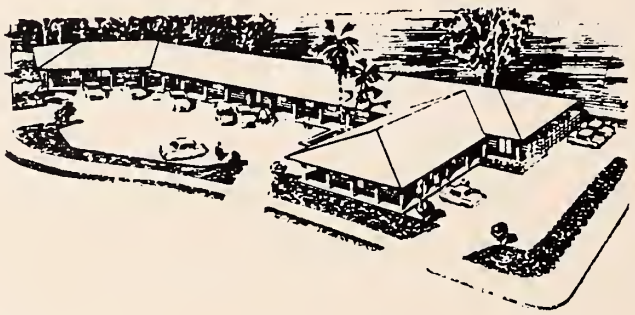
*bidCAPS is a trademark of Bristol Laboratories, Division of Bristol-Myers Company, for its brands of twice-a-day capsules. Each Tetrex bidCAP contains Tetrex (tetracycline phosphate complex) equivalent to 500 mg. tetracycline HCl activity.

DOCTOR'S OPPORTUNITY

LIVE IN SAN DIEGO

Deluxe Medical Suite

Large enough for two physicians



Purchase or Lease

In a well established, successful medical building in the college area. Single story construction. Ample parking, easy access . . . like new.

Every modern convenience including individual central air conditioning, and central vacuum. Ideal for general practice, internal medicine, pediatrics, etc.

This is the only vacancy in the entire building.

All of the tenants have developed large practices.

- Owner will lease to one or two medical practitioners, or this valuable suite may be purchased, for less than replacement value, on easy terms like rent. Little or no down payment required. All utilities provided.

You Must Act Now – Only One Suite Available

McBride Company

1357 Rosecrans Street, Suite F

San Diego, Calif. 92106

Office, 222-8950, or 222-5222

Squaw Peak Sketches



Of Pithy Pioneer Physicians

by dry gulch jake

Item: Four Peaks, Fort McDowell and Wassaja

Some inquiries have been made following a previous note on Carlos Montezuma, the Apache physician. The inquiries were about the activities of Fort McDowell, in the Apache days. Well, would you believe one inquiry?

Brandes[1] in his succinct summary of Arizona Military Posts lists fifty camps, posts and stations which were active at one time or another in the Arizona Military Department. The earliest establishment was Camp Calhoun (later Camp Yna) 1849 and the last to be established was Fort Huachuca 1887 — it has now turned electronics and is continually expanding its facilities; the last active "Frontier Post."

Camp DcDowell[2] was most clearly described by Army physicians, Smart, De Witt and Reagles in 1875. The following is from their account, "This post is situated on the west bank of the Rio Verde (Fig. 3) about eight miles above its junction with the Salt River — forty-five miles north of the Maricopa and Pima Indian villages. It is reached by steamer from San Francisco to San Diego, California, thence by stage via Yuma to Maricopa Wells, thence weekly mail to the post . . . floods on the Gila and the Salt frequently delay mail three to four weeks. Letters usually reach San Francisco in fiftcen days and Washington twenty-five days."

The post was established in 1965[2] by, "five Companies of California volunteers, as a point from which to operate against, or treat with, the Indians of the neighboring mountains . . ." An accurate plot and minute description of the post buildings, including the hospital is given. "The hospital, recently completed (1875) has a principal ward 33 x 12 feet, 12 feet in height . . . contains eight beds." (Fig. 1).

The consolidated sick-report for Camp McDowell 1870-74 lists the mean strength as 5-10 officers and 111-221 enlisted men. Three cases of typhoid fever were recorded, nine of remittent fever, thirty-five cases of syphilis, two hundred thirteen cases of dysentery, and under the classi-



FIG. 1

fication of violent diseases and deaths, six gunshot wounds and an arrow wound.

Leonard Wood, Assistant Surgeon, U.S.A. was stationed at McDowell following his exploits at Fort Huachuca during the Geronimo campaign. He recorded in his diary Oct. 11, 1888[3] this is the hottest place in the world where white troops are stationed, . . . ground temperature in the summer 170 degrees . . . The shade temperature is 120 degrees and above . . . The water in the bath tubs is so hot it cannot be used when drawn, as the pipe lies near the surface, where the heat is from 150 degrees to 170 dedegrees . . . so we draw it the night before."

Martha Summerhayes[4] in her classic description of her life with a soldier husband, in Arizona, four years beginning 1874, with adventures at Camp Apache and Camp McDowell related her saga.

"We occupied quarters at the end of the row, and a large bay window looked out over a rather desolate plain and across to the large and well kept hospital. (Fig. 2) . . . I had nothing but some shades on the windows. The walls and floor were adobe, and some men from the Company came and laid down old canvas, then the carpet and drove great spikes around the edge to hold it.

"In the front of our quarters was a Ramada supported by two rude poles and a cottonwood tree. Then came the sidewalk, and the acequia (ditch) then a row of young cottonwood trees, then the parade ground. Through the acequia ran the clear water that supplied the post, and under the shade of the Ramada hung the large ollas from which we dipped the drinking water. . . . ice was not dreamed of in the far plains of McDowell. With summer heat . . . sleep in-



FIG. 2



FIG. 3



FIG. 4



FIG. 5



FIG. 6

side the house was impossible and we soon followed the example of the Cavalrymen who had their beds out on the parade ground.

"The Sunday inspection of men and barracks, performed with precision and formality, often in full dress uniform, gave us something to mark the weeks by. Another bright winter found us gazing at the Four Peaks . . . the only landmark on the horizon."

This formality which Mrs. Summerhayes noted was not the usual custom and Brandes puts it very well "there was always some spit and polish among the officers but even such men as George Crook realized the need for dressing in a manner which would permit him to best move around in comfort. His pith helmet, civilian jacket with large pockets, (paratroopers please note) and rough trousers remind one of anything but an Army General."[1]

Fort McDowell on April 10, 1890, became a reservation for the Mohave-Apache (Yavapai) and some Pima. Over 25,000 acres were then set aside for the Indians, and in 1903 additional acreage was allocated.[1]

So indeed it was to the "homeland" of his people that Wassaja returned to spin out his short bit of time in the winter of 1922. Wassaja was a Mohave-Apache! (Fig. 4, 5 & 6)

John W. Kennedy, M.D.

1. Brandes, Ray: Frontier Military Posts of Arizona, Dale Stuart King publisher, Six Shooter Canyon, Globe, Arizona 1960 pp. 53-55.
2. Circular No. 8, War Department, Surgeon-General's Office, Washington, May 1, 1875. A report on the Hygiene of the United States Army, with descriptions of Military Posts, Washington Printing Office, pp. 545-546.
3. Hagedorn, Hermann, Leonard Wood, a biography, Harper & Bros. 1931, Vol. 1 pp. 113-114.
4. Summerhayes, Martha: Vanished Arizona, J. B. Lippincott Co., Philadelphia 1908, reprinted 1963, pp. 184-195.

FOR YOUR PERMANENT FILE



HANDSOME, DURABLE WHITE & GOLD VINYL COVERED BINDERS TO PRESERVE PAST ISSUES OF ARIZONA MEDICINE. EACH BINDER HOLDS UP TO TWELVE ISSUES.

ONLY $3.00 EACH

Arizona Medicine

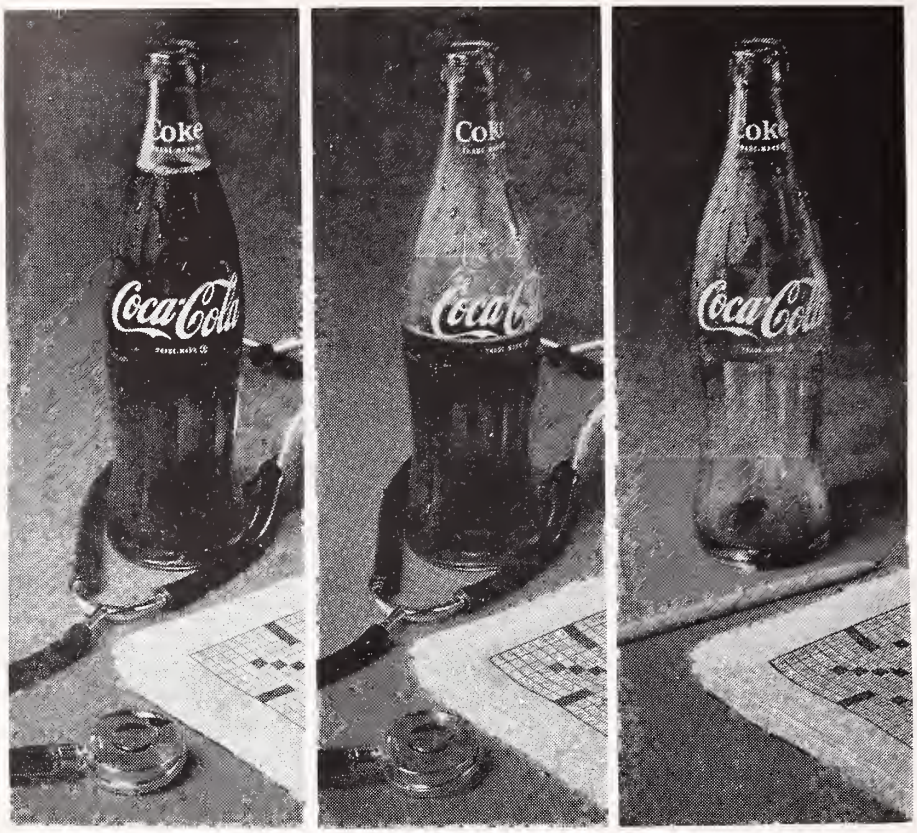
4601 N. Scottsdale Rd., Scottsdale, Ariz., 85251

Name _____

Address _____

PLEASE SEND _____ BINDERS

I understand that these will be billed to me at the rate of $3.00 each.



11:47 pm 11:53 pm 12:06 am

The meaningful pause. The energy it gives. The bright little lift. Coca-Cola with its never too sweet taste, refreshes best. Helps people meet the stress of the busy hours. This is why we say **things go better with Coke**
TRADE-MARK®

Medical Center X-Ray and Clinical Laboratory

1313 North 2nd Street
Phoenix, Arizona
Phone ALpine 8-3484

DIAGNOSTIC X-RAY

CLINICAL PATHOLOGY **TISSUE PATHOLOGY**

ELECTROCARDIOGRAPHY **BASAL METABOLISM**

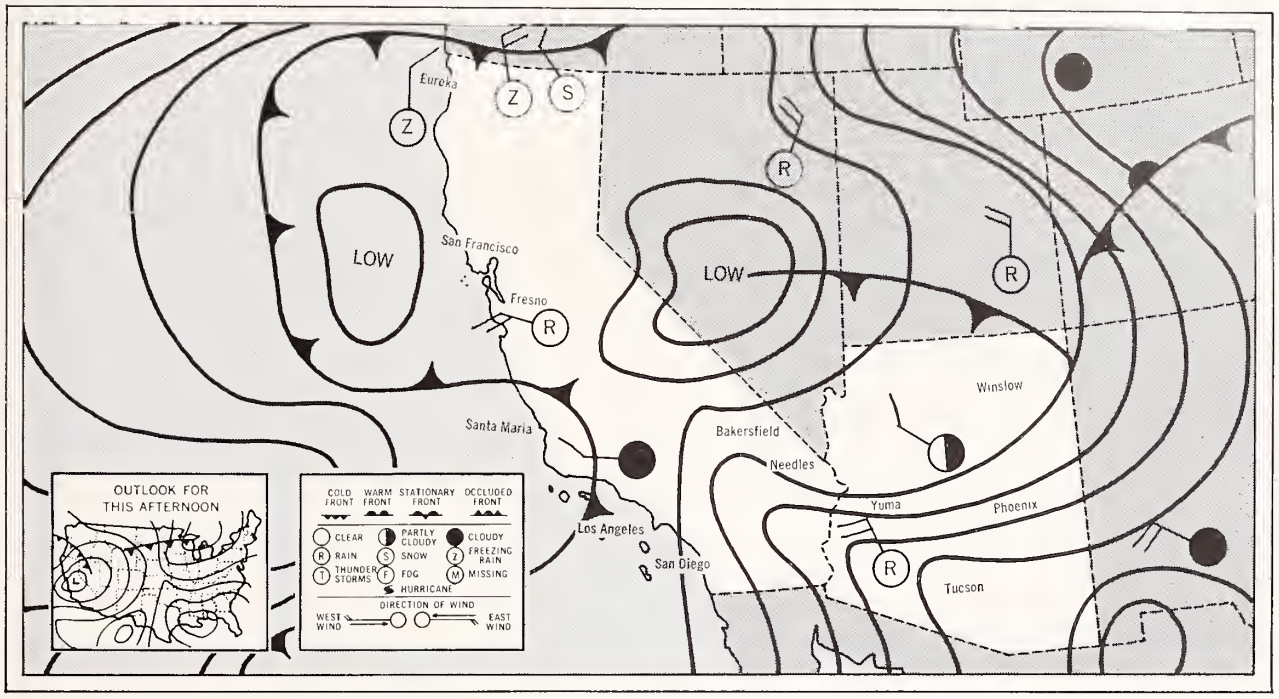
R. Lee Foster, M.D., F.A.C.R., F.A.C.P., Director *Martin L. List, M.D., Radiologist*

Diplomates of American Board of Radiology

Lorel A. Stapley, M.D., Consultant Pathologist

REGIONAL WEATHER FORECAST

Heavy Rains, Local Flooding, Snow and Colder Followed by Cough, Stuffed and Runny Noses and Aches and Pains.



Tussagesic breaks up coughs, quickly clears stuffed and runny noses and relieves aches and pains. Provide coverage of the tough cold for up to 24 hours with just a single timed-release tablet dosed morning, midafternoon and at bedtime.

each

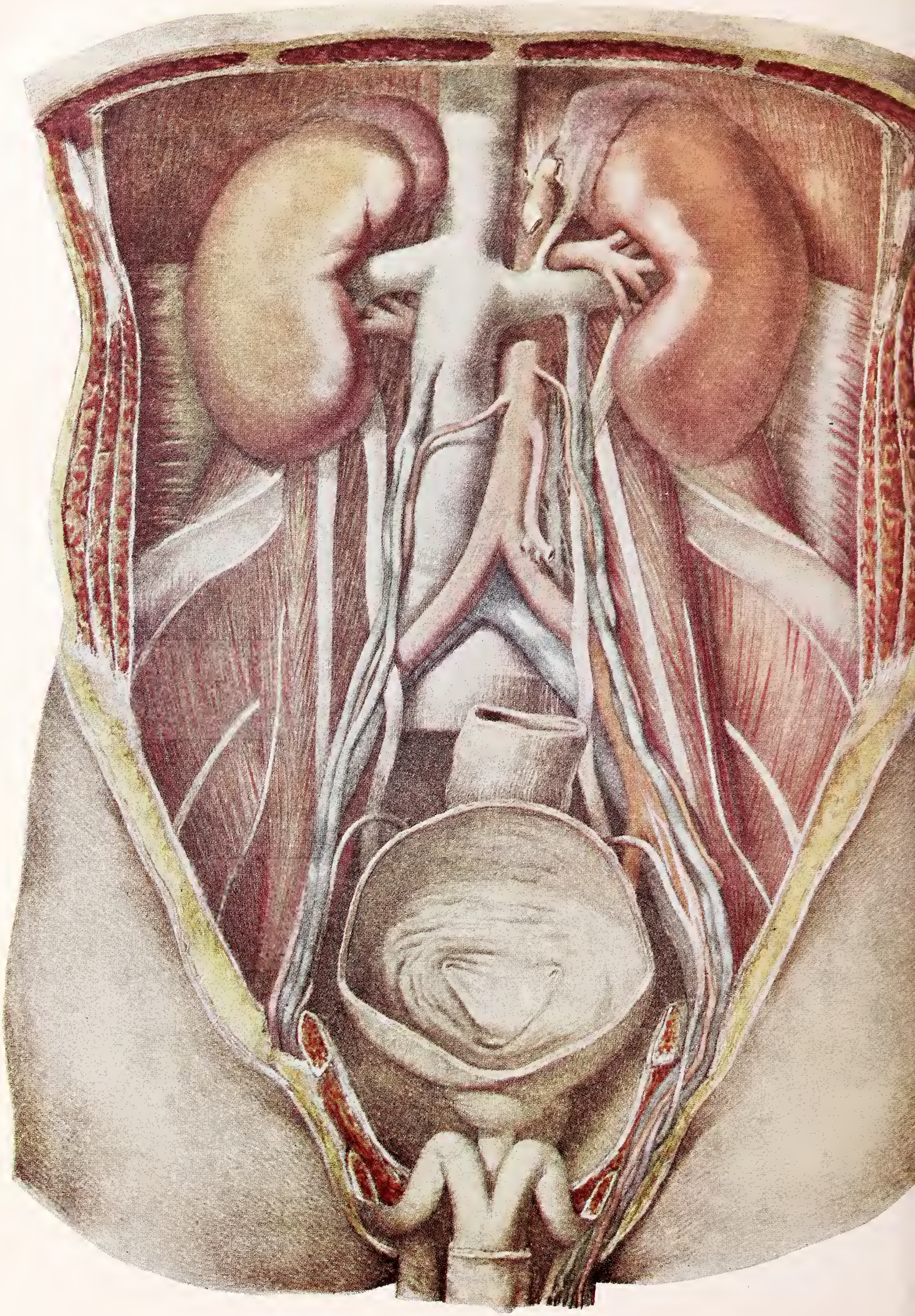
Tussagesic®

timed-release tablet contains:

Triaminic® (phenylpropanolamine hydrochloride 25 mg., pheniramine maleate 12.5 mg., pyrilamine maleate 12.5 mg.)	50 mg.
Dextromethorphan hydrobromide	30 mg.
Terpin hydrate	180 mg.
Acetaminophen	325 mg.

Dosage: Adults—1 tablet, swallowed whole to preserve timed-release feature, in morning, midafternoon and at bedtime. *Side effects:* Occasional drowsiness, blurred vision, cardiac palpitations, flushing, dizziness, nervousness or gastrointestinal upsets. *Precautions:* The patient should be advised not to drive a car or operate dangerous machinery if drowsiness occurs. Use with caution in patients with hypertension, heart disease, diabetes or thyrotoxicosis.

DORSEY LABORATORIES • *a division of The Wander Company* • **LINCOLN, NEBRASKA**



Wide-range bactericidal action for genitourinary infections

NEW OMNIPEN® (AMPICILLIN) WYETH

A penicillin that exhibits effectiveness within the gram-positive spectrum of penicillin G* and the gram-negative spectrum of chloramphenicol and the tetracyclines.*

Active at foci of infections—kidney, ureter, bladder or urethra.

Effective against many gram-negative and gram-positive pathogens—thus may be valuable not only in genitourinary but also in common respiratory and gastrointestinal infections.

Normally produces high and persistent levels in blood and high concentrations in bile and urine.

Significant inherent stability.

**Exclusive of penicillinase-producing bacteria.*

Indications: Urinary tract infections, especially those caused by *E. coli*, *Proteus mirabilis*, and *Streptococcus faecalis* and *viridans;* respiratory infections caused by *H. influenzae*, pneumococci, streptococci, and nonpenicillinase-producing staphylococci; and gastrointestinal infections caused by *Shigella* and *Salmonella*, including *Sal. typhosa.*



Contraindications: Hypersensitivity to penicillin; infections due to penicillinase-producing staphylococci and other penicillinase-producing bacteria.

Precautions: If allergic reaction occurs, discontinue ampicillin and administer epinephrine, corticosteroids, antihistamines and/or pressor amines as indicated. Transient moderate elevation of SGOT values of undetermined significance was noted in a few infants. Liver and kidney function as well as hematopoietic tests are advisable during therapy, particularly in infants. As with other antibiotics, precautions should be taken against gastrointestinal superinfection. Safety for use in pregnancy has not been established.

Adverse Reactions: Occasional mild side effects as urticaria, skin rash, pruritus, diarrhea, nausea and vomiting. There have been no reports of blood dyscrasias, liver or kidney damage. Anaphylaxis has been reported.

Composition: Capsules, 250 mg.

American Hospital Formulary Service Category No. 8:12.16.

Wyeth Laboratories Philadelphia, Pa.

Wyeth® SERVICE TO MEDICINE

MOLECULAR REMODELING—

laboratory exercise or clinical necessity?

More than twenty-five years have passed since the discovery of the diuretic activity of sulfanilamide started pharmacologists on a succession of molecular remodelings to find the ideal diuretic.

Diuresis—a sought-after clinical effect from an unwanted side effect

It started in 1937 when a clinician reported that the administration of a sulfonamide was sometimes accompanied by an unexplainable side effect—metabolic acidosis.[1] Three years later the side effect was explained. The sulfonamide radical of sulfanilamide inhibited carbonic anhydrase,[2] the enzyme responsible for converting carbon dioxide and water to hydrogen ions and bicarbonate ions.

Later, other investigators showed by dog experiments that metabolic acidosis probably resulted when the inhibition of carbonic anhydrase upset the exchange of hydrogen and sodium ions, causing increased excretion of sodium as the bicarbonate.[3]

It was twelve long years after the first report of the unexplainable side effect (metabolic acidosis) that it was finally shown that large doses of sulfanilamide administered to edematous patients were indeed capable of promoting diuresis.[4] However, the possibility of toxic effects from its prolonged use and its relatively weak diuretic action made it impractical for clinical use as a diuretic.[5]

Because the inhibition of carbonic anhydrase seemed to be the key to effective diuresis, investigators began to look for more potent enzyme inhibitors —in the hopes that they would be more effective diuretics.

The most important of these early compounds, acetazolamide, enjoyed several years of fairly wide clinical use.

Its carbonic anhydrase inhibitory activity was several hundred times greater than that of sulfanilamide.[6] The increase in inhibitory activity, however, increased not only the excretion of sodium and bicarbonate ions, but also the excretion of potassium.[7] And, like its predecessor, acetazolamide precipitated mild acidosis. Its prolonged use could result in hypokalemic acidosis.[7]

The 'thiazides'—an answer to the metabolic acidosis caused by carbonic anhydrase inhibition

Despite the fact that the sulfonamide group appeared to be responsible for carbonic anhydrase inhibition which in turn appeared to be responsible for diuresis, investigators began to synthesize compounds with structural alterations to the sulfonamide group.

The first major breakthrough came with the synthesis of chlorothiazide. Altering the sulfonamide group did indeed alter the ability of chlorothiazide to inhibit carbonic anhydrase—it was only 1/10th as potent as acetazolamide in inhibiting the enzyme.[8] Despite the drop in inhibitory potency, however, chlorothiazide proved to be an effective diuretic—an observation that led to the conclusion that its diuretic action was due to some mechanism other than its action on carbonic anhydrase.[9, 10]

For effective diuresis, chlorothiazide was administered in daily dosages ranging from 250 to 2000 mg.[11] It increased the excretion of sodium and chloride; and, to a lesser extent, potassium and bicarbonate.[11] The excretion of potassium appeared to be maximal at higher dose levels at which, theoretically, the carbonic anhydrase inhibitory effect is more active.[11] Its prolonged use, therefore, could sometimes result in metabolic hypokalemic, hypochloremic alkalosis.[7]

Naturetin—effective diuresis with more favorable electrolyte balance

Other thiazides followed—with improvements being aimed at two particular areas: 1. attempts to increase diuretic action in relation to the milligram potency of the drug, and 2. attempts at a more favorable sodium/potassium ratio in the urine, i.e., to decrease the excretion of potassium while maintaining the excretion of sodium.[12]

One of these, Naturetin, Squibb Bendroflumethiazide, has made advances on both these points. "By adding a 3-benzyl radical to hydroflumethiazide a rather dramatic reduction in dose range is accomplished. With this drug, effective sodium excretion is obtained with doses between 2.5 and 10 mg., which is a 200 to 1 ratio as compared to chlorothiazide..."[13]

Moreover, due probably to its virtual lack of carbonic anhydrase inhibition, Naturetin (bendroflumethiazide) has been shown to cause less potassium and bicarbonate loss and less alteration in urinary pH than either chlorothiazide or hydrochlorothiazide.

Naturetin is outstandingly effective not only in establishing, but also in maintaining, excretion of retained fluid in edematous patients. And its duration of action is sufficiently prolonged to allow a single daily administration in most patients. Naturetin is also an effective antihypertensive agent.

Contraindications: Severe renal impairment; previous hypersensitivity.

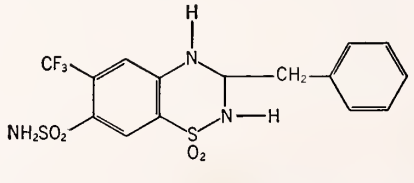
Warning: Ulcerative small bowel lesions have occurred with potassium-containing thiazide preparations or with enteric-coated potassium salts supplementally. Stop medication if abdominal pain, distension, nausea, vomiting, or G.I. bleeding occur.

Precautions: The dosage of ganglionic blocking agents, veratrum, or hydralazine when used concomitantly must be reduced by at least 50% to avoid orthostatic hypotension. Electrolyte disturbances are possible in cirrhotic or digitalized patients.

Side Effects: Bendroflumethiazide may cause increases in serum uric acid, unmask diabetes, increase glycemia and glycosuria in diabetic patients and may cause hypochloremic alkalosis, hypokalemia; cramps, pruritus, paresthesias, and rashes may occur.

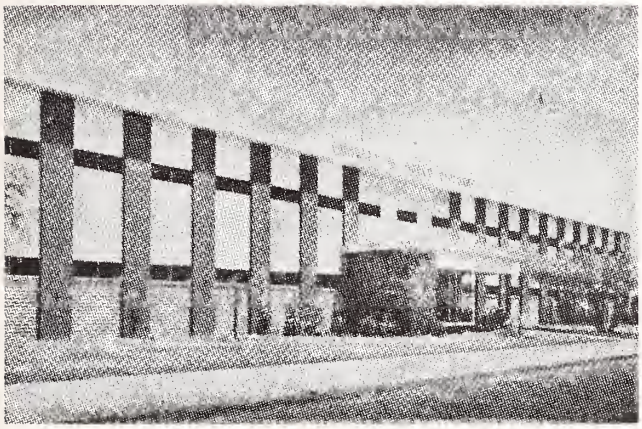
Supplied: Naturetin (Squibb Bendroflumethiazide) 5 mg. and 2.5 mg. tablets. Also available Naturetin c K [Squibb Bendroflumethiazide (5 or 2.5 mg.) with Potassium Chloride (500 mg.)]. For full information, see Product Brief.

References: **1.** Southworth, H.: Proc. Soc. Exper. Biol. & Med. *36*:58, 1937. **2.** Mann, T. and Keilin, D.: Nature *146*:164, 1940. **3.** Pitts, R. F., and Alexander, R. S.: Am. J. Physiol. *144*:239, 1945. **4.** Schwartz, W. B.: New England J. Med. *240*:173, 1949. **5.** Friedberg, C. K., in Moyer, J. H., and Fuchs, M.: Edema Mechanisms and Management, Philadelphia, W. B. Saunders Co., 1960, p. 259. **6.** Cumming, J. R.; Tabachnick, E., and Seelig, M., in Moyer, J. H., and Fuchs, M.: op. cit., p. 254. **7.** Werko, L., in Moyer, J. H., and Fuchs, M.: op. cit., p. 188. **8.** Beyer, K. H., Jr., in Moyer, J. H., and Fuchs, M.: op. cit., p. 274. **9.** Maren, T. H., and Wiley, C. E.: J. Pharmacol. & Exper. Therap. *143*:230, 1964. **10.** Earley, L. E., and Orloff, J.: Ann. Rev. Med. *15*:149, 1964. **11.** Fuchs, M., and Mallin, S. R., in Moyer, J. H., and Fuchs, M.: op. cit., p. 276. **12.** Ford, R. V., in Moyer, J. H., and Fuchs, M.: op. cit., p. 290. **13.** cited in Fuchs, M., and Mallin, S. R. (ref. 11): op. cit., p. 283.



Naturetin®
SQUIBB BENDROFLUMETHIAZIDE
to reduce excess fluid
or high blood pressure

HOSPITAL MEDICAL CENTER, LTD.



100 E. FOURTH ST. SCOTTSDALE, ARIZONA

Adjoining Scottsdale Baptist Hospital

ALLERGIST
Davis I. Arnow, M.D.
R. C. Romero, M.D.

ANESTHESIOLOGIST
Sue Boyett, M.D.

FAMILY DOCTOR
Jack E. Groh, M.D.
William B. McGahey, M.D.
John A. Martin III, M.D.

GENERAL PRACTICE
Willard F. Worthen, M.D.

GENERAL SURGERY
Boyd H. Metcalf, M.D.
Jack O. McFarland, M.D.

GENERAL SURGERY — CANCER
Herbert N. Munhall, M.D.

INTERNAL MEDICINE & CARDIOLOGY
Donald L. Corzine, M.D.
John F. Currin, M.D.

OBSTETRICS & GYNECOLOGY
Roy O. Young, M.D.

OPHTHALMOLOGY
Peter S. Sykowski, M.D., F.A.C.S.
Robert L. Yockey, M.D.
eye physician and surgeon

ORTHODONTIST
James C. Toye, D.D.S.

ORTHOPEDIC SURGERY
Malcolm F. Dorfman, M.D.

PATHOLOGY
Thomas B. Jarvis, M.D.
Fred C. Schoene, M.D.

PERIODONTIST
J. Richard Loughry, D.D.S.

THORACIC CARDIOVASCULAR SURGERY
Carl Impellitier, M.D.

UROLOGIC SURGERY
Wilfred M. Potter, M.D.

RADIOLOGY
M. Herbert Nathan, M.D.

DENTISTRY
Lumone E. Willmeng, D.D.S.

OTHERS
Jean Hoffman, Reg. Physical Therapist
Srutwa Pharmacy
Scottsdale Opticians

For Leasing Information Call
946-9091 or 946-5344

PROGRAM
ARIZONA CHAPTER
AMERICAN COLLEGE OF SURGEONS

January 20, 21, 1967

FRIDAY and SATURDAY, ARIZONA INN

Tucson, Arizona

FRIDAY

8:00 to
9:30 — Breakfast — Business meeting

9:30 — Welcome — Dr. George L. Hoffman

9:45 — TREATMENT OF BURNS — Dr. Karl Moyer

10:15 — RADICAL IRRADIATION THERAPY OF HODGKIN'S DISEASE, CARCINOMA OF THE PROSTATE AND CANCER OF THE BLADDER — Dr. Malcolm Bagshaw

10:45 — Coffee break

11:00 — WHAT OPERABLE BREAST CANCERS SHOULD HAVE LESS THAN A RADICAL MASTECTOMY — Dr. Lauren Ackerman

11:30 — CURRENT THEORY & PRACTICAL ASPECTS OF BLOOD COAGULATION — Dr. Oscar Thorup

12:15 — Lunch — DATA FROM THE MOON PROBES — Dr. Gerald P. Kuiper

2:00 — RADIOSENSITIZATION BY INTRA-ARTERIAL CHEMICAL AGENTS — Dr. Malcolm Bagshaw

2:30 — ELECTROMICROSCOPY — Dr. Wayne Ferris

3:00 — Coca-Cola break

3:15 — THE CHANGING MEDICAL-SOCIAL & MEDICAL-ECONOMIC ASPECTS OF HOSPITAL ORGANIZATION & MEDICAL PRACTICE — Mr. Richard Durbin

3:45 — THE UTILIZATION OF EMERGENCY ROOMS — Dr. Henry Limbacher

6:30 — Cocktails

7:30 — DINNER — Speaker: BARRY GOLDWATER

SATURDAY

8:00 to
9:30 — Breakfast — Business Meeting

9:45 — HYPER-COAGULABILITY — Dr. Oscar Thorup

10:15 — DIAGNOSIS AND TREATMENT OF NON-NEOPLASTIC TUMORS OF THE SOFT TISSUE — Dr. Lauren Ackerman

10:45 — Coffee break

11:00 — Dr. John Paul North

11:15 — MEDICAL EDUCATION — Dr. Karl Moyer

FACULTY:

Dr. Karl Moyer, Director of Research, Michigan Technological University.

Dr. Lauren Ackerman, Professor of Surgical Pathology & Pathology, Washington University School of Medicine, St. Louis.

Dr. Malcolm A. Bagshaw, Director, Division of Radio Therapy, Stanford University School of Medicine.

Dr. Wayne Ferris, Dept. of Zoology, University of Arizona.

Dr. Oscar Thorup, Professor and Head Dept. of Medicine, School of Medicine, University of Arizona.

Dr. Henry Limbacher, Chairman of Arizona Trauma Committee.

Mr. Richard Durbin, Administrator, Tucson Medical Center Hosp.



in chronic illness

B and C vitamins are part of therapy: An imbalance of water-soluble vitamins and chronic illness often go hand in hand. STRESSCAPS capsules, containing therapeutic quantities of vitamins B and C, are formulated to meet the increased metabolic demands of patients with physiologic stress. In chronic illness, as with many stress conditions, STRESSCAPS vitamins are therapy.



Stresscaps®

Stress Formula Vitamins Lederle

FOR PROFESSIONAL RECOMMENDATION ONLY

Each capsule contains:

Vitamin B_1 (as Thiamine Mononitrate)	10 mg
Vitamin B_2 (Riboflavin)	10 mg
Vitamin B_6 (Pyridoxine HCl)	2 mg
Vitamin B_{12} Crystalline	4 mcgm
Vitamin C (Ascorbic Acid)	300 mg
Niacinamide	100 mg
Calcium Pantothenate	20 mg

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York

Lederle

628-6—3614



101 East Fourth Street, **Scottsdale, Arizona**
Adjoining Scottsdale Baptist Hospital NOW LEASING CUSTOM SUITES

Scottsdale's Newest & Finest Medical Building

These advantageous, time-saving features:

- Adjoining Scottsdale Baptist Hospital
- Heat, Air Conditioning, all electric service, daily janitor service furnished
- Spacious parking lot for patients
- Covered parking for tenants

DENTIST
R. A. Hossler, D.D.S.
Patrick Ryan, D.D.S

DENTAL LAB.
F. Jefferson Blake

OBSTETRICS & GYNECOLOGY
Roy O. Young, M.D.
Gregory C. Smith, M.D.

PSYCHIATRY
Murray Urie, M.D.

Adjoining Hospital Medical Center with:

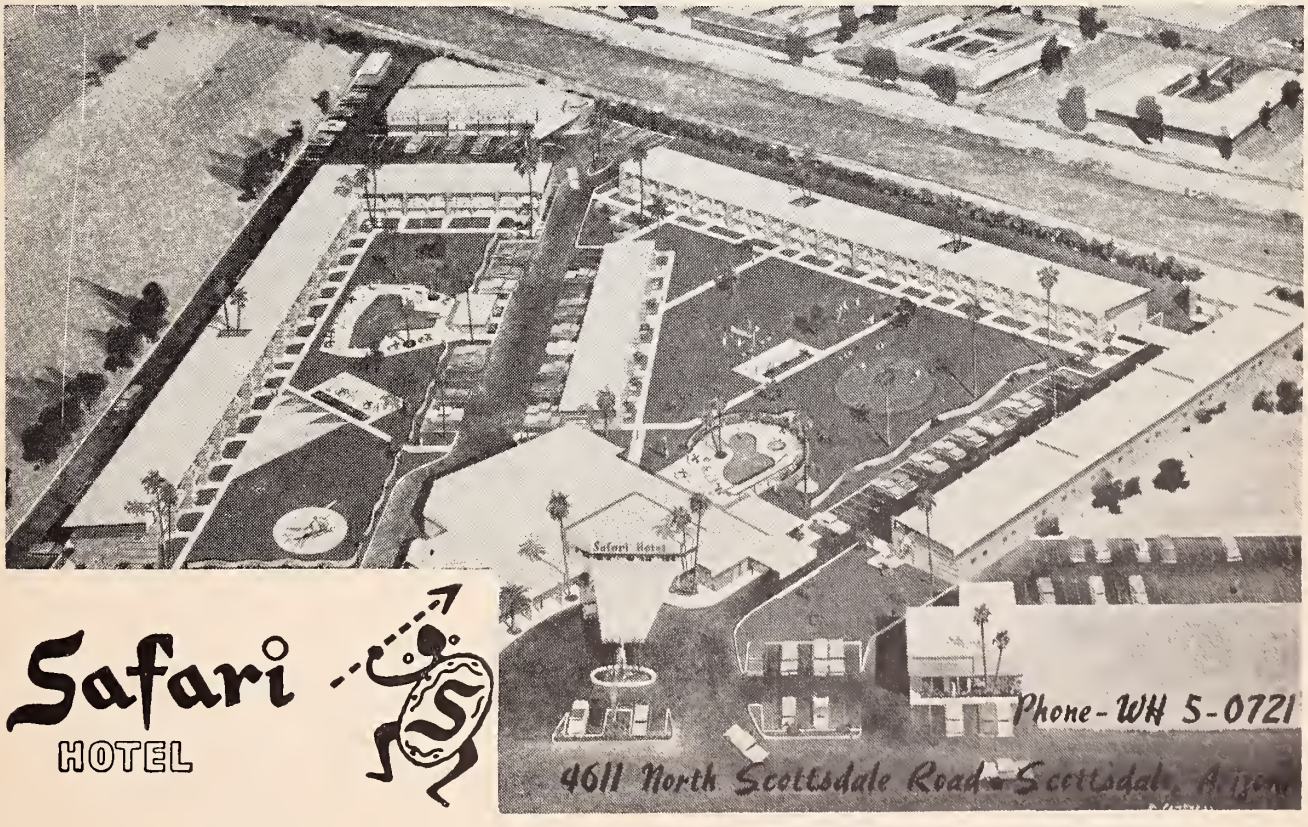
PATHOLOGY
Thomas B. Jarvis, M.D.
Fred C. Schoene, M.D.

PHYSICAL THERAPIST
Jean Hoffman, R.P.T.

RADIOLOGY
M. Herbert Nathan, M.D.

OTHERS
Srutwa Pharmacy
Scottsdale Opticians

For Leasing Information Call 946-9091



co–op.er.a.tion, co.op.er.a.tion, co.op.ēr.a.tion (kō–op'er–ā'shen), n. 1. a co–operating; joint effort the benefits of which are shared by all members.

UP TO $1,000 MONTHLY BENEFIT
NOW AVAILABLE
ON A STATEWIDE BASIS - MEANS STABILITY

Disability Insurance pays...not only when you're sick or injured...but also in "peace of mind" when you're well!
"The Only Known Substitute for Earning Power"

NATIONAL CASUALTY COMPANY
OF DETROIT, MICHIGAN

Arizona Representatives

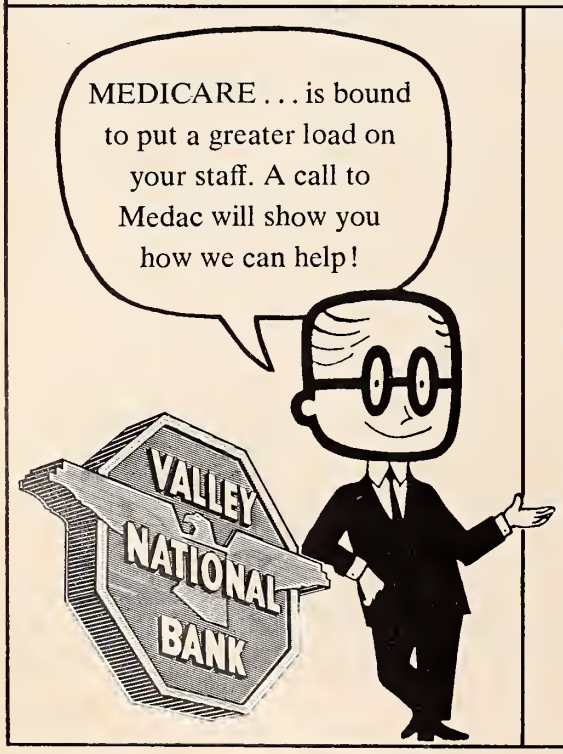
PHOENIX ★ CHARLES A. de LEEUW
3424 NORTH CENTRAL AVENUE
(PHONE 266–2403)

TUCSON ★ RONALD E. DEITRICH
SUITE 9, PIMA PLAZA, 2030 E. BROADWAY
(PHONE 623-7941)

Approved and Recommended by the
MEDICAL ECONOMICS COMMITTEE AND THE COUNCIL
...SINCE 1953

Doctor: Cut your billing and bookkeeping costs!

The Valley Bank offers you "Medac" – Arizona's most *complete*, automated medical-dental billing-bookkeeping service.



* Speeds your accounts receivable collections.
* Gives you up-to-the-minute reports of your balance sheet and P.&L. as frequently as every ten days.
* Provides smooth, efficient continuity despite personnel turnover.

This is a dependable, accurate, *quality* service which we believe to be the best in the U.S. The doctors we now serve are delighted with its results.

Before you consider *any* service system, let a VNB representative show you the very real advantages of VNB-MEDAC — at your convenience (and without obligation).

CONTACT ANY VALLEY BANK OFFICE

or phone:

in Phoenix
Bud Gray **261-1317**

in Tucson
Don Markle **624-8711**

HOBBY HORSE RANCH SCHOOL

A School For Exceptional Children

The Hobby Horse Ranch School is both home and school for a small group of children. It welcomes the child who is mentally retarded and physically handicapped as well as the backward child who suffers no physical handicap.

The Hobby Horse Ranch School is a branch of Fairview School in Fishkill, New York which was established in 1936.

Directors: Blanche C. Lightowler, B.A.
Matthew W. Lightowler

P.O.B. 44, Cortaro, Ariz.



420 Mother Cow Permit

CATTLE RANCH

No Feeding Necessary

500 Deeded Acres

80 Sections Forest Land
Good 3-Bedroom Home
North and West of Clifton, Arizona

Best Cattle Country in Arizona
(Excellent Hunting Area)

Price: $400,000 — 29% Down
Free and Clear

Price includes all livestock on ranch

DESERT REALTY CO., INC.

430 West Main Street
Mesa, Arizona

964-1483 (Ask for Vanhook) 964-6546

MEDICINE IN TERRITORIAL ARIZONA

by

Frances E. Quebbeman

Limited Number of Autographed Copies Now Available

$7.50 each

Arizona Medical Association
4601 N. Scottsdale Road, Suite 201
Scottsdale, Arizona 85251



A common cold! I thought everything was a "virus" these days.

Although he'd prefer a more exotic name for it, you know he's suffering from an ordinary, old common cold. And, he's congested. He'll breathe easier when you prescribe Novahistine LP.

Two long-acting tablets in the morning and two in the evening will provide around-the-clock relief by helping to keep congested air passages clear, thus enabling your cold patient to enjoy normal and free breathing. This action of long-acting Novahistine LP helps restore normal mucus secretion and ciliary activity—physiologic defenses against infection of the respiratory tract.

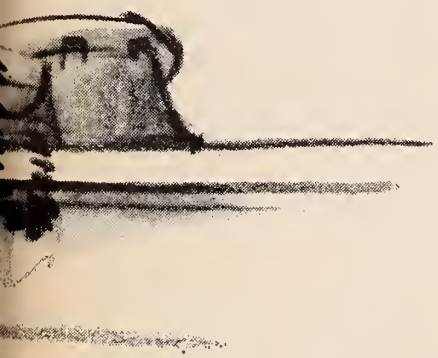
Use cautiously in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Tell patients who operate machinery or motor vehicles that drowsiness may result.

Each Novahistine LP tablet contains: phenylephrine hydrochloride, 25 mg., and chlorpheniramine maleate, 4 mg.

NOVAHISTINE® LP

For relief of nasal congestion.

DOW **PITMAN-MOORE** Division of The Dow Chemical Company, Indianapolis

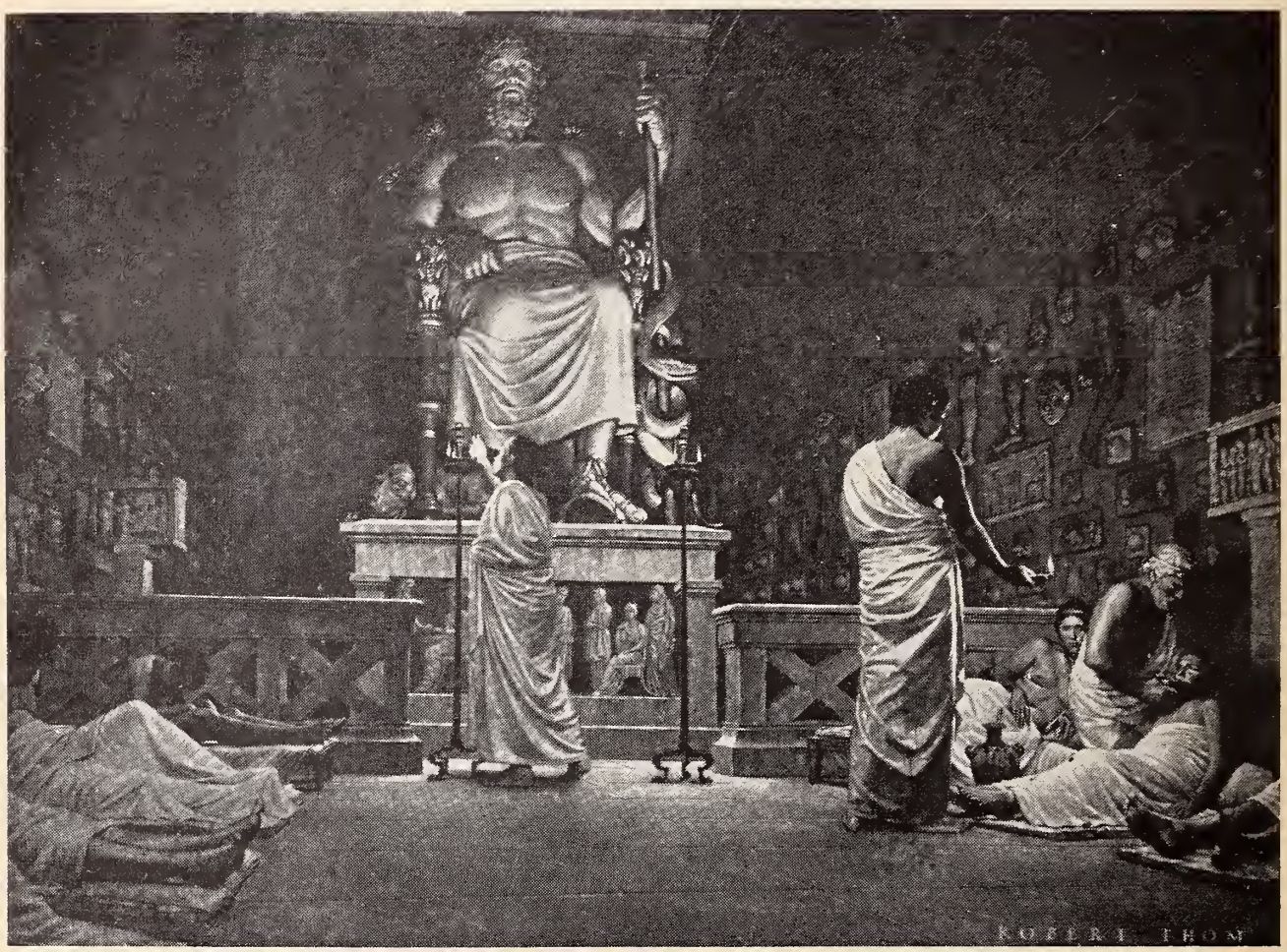


AESCULAPIUS AWARD PROGRAM

ALL ASSOCIATION MEMBERS ARE URGED TO ENTER

$200.00 CASH AWARD

Complete the application below before January 1st to be eligible for the MEAD JOHNSON COMPANY, INC. Aesculapius Award. This award with an engraved wall plaque will be presented to the exhibitors of the best scientific presentation at the 1967 Annual Meeting of this Association.



THE GOD AESCULAPIUS

Photo courtesy of Parke, Davis & Co. c 1957

SCIENTIFIC EXHIBIT APPLICATION FORM

PLEASE ACCEPT MY APPLICATION FOR ENTRY IN THE AESCULAPIUS AWARD PROGRAM BEING HELD AS PART OF THE 76TH ANNUAL MEETING OF THE ARIZONA MEDICAL ASSOCIATION, APRIL 26-29, 1967.

I PROPOSE TO EXHIBIT:

.....

.....

Name:

Address

.....

I understand that further information may be requested on the acceptance of this application.

Physicians' Directory

ArMA

DIRECTORY AND CLASSIFIED RATES

- *Professional card and classified space is available at $3.50 for the first fifty words or less; 5c for each additional word thereafter.*

- *Mail copy to Business Manager, ARIZona MEDICINE, Post Office Box 128, Scottsdale, Arizona 85252, not later than the tenth of the month preceding publication.*

ALLERGY

JOHN F. McKENNA, M.D.
Associate Fellow, American College of Allergists

PARK CENTRAL NORTH
Medical Building
555 West Catalina
Phoenix, Arizona 85013
Phone 264-1381

DANIEL H. GOODMAN, M.D., F.A.C.P.
Diplomate

American Board of Internal Medicine
and Subspecialty Board of Allegry

31 W. Camelback Road
Phoenix
277-3337

500 W. 10th Place
Mesa
969-3966

HOWARD M. PURCELL, JR., M.D.

JAMES A. SMIDT, M.D.

ALLERGY OF CHILDREN

American Board of Pediatrics
American College of Allergists

322 W. McDowell Rd. PHOENIX, ARIZONA
AL 2-9731

ROBERT HEALY STEVENS, M.D.

Fellow American College Chest Physicians
Allergy and Internal Medicine

The Medical Center
1313 N. 2nd Street
Phoenix 4, Arizona

CARDIOLOGY

George W. Bascom, M.D., F.A.C.C., F.A.C.P.

Diplomate of American Board
of Internal Medicine

Practice Limited to Cardiology

Professional Building
Sierra Vista, Arizona 85635

DERMATOLOGY

GEORGE K. ROGERS, M.D.

DERMATOLOGY

Diplomate of American Board of
Dermatology and Syphilology

Phone ALpine 3-5264
105 W. McDowell Road Phoenix, Arizona

ONCOLOGY

JAMES M. OVENS, M.D.
F.A.C.S. F.I.C.S.

Diplomate American Board of Surgery
Cancer and Tumor Surgery
X-ray and Radium Therapy

333 W. Thomas Road Phone 279-7301
Phoenix 13, Arizona

ORTHOPEDIC SURGERY

THE ORTHOPEDIC CLINIC
ORTHOPEDIC SURGERY

W. A. Bishop, Jr., M.D., F.A.C.S.* — A. L. Swenson, M.D. F.A.C.S.* — Ray Fife, M.D., F.A.C.S.* — Sidney L. Stovall, M.D. F.A.C.S.* — Thomas H. Taber, Jr., M.D., F.A.C.S.*

Robert A. Johnson, M.D.* — Paul E. Palmer, M.D.*

*Diplomates of the American Board of Orthopedic Surgery

2620 N. 3rd Street — Phoenix, Arizona — CR 7-6211

Physicians' Directory

PATHOLOGY

LOUIS HIRSCH, M.D.
RALPH H. FULLER, M.D.
WILLIAM M. HINDMAN, M.D.
EDWARD A. BRUCKER, M.D.
ARTHUR D. SILVER, M.D.

Diplomates American Board of Pathology
Clinical Pathology — Pathologic Anatomy

1601 N. Tucson Blvd.
Tucson, Arizona

PSYCHIATRY

LEO RUBINOW, M.D.
PSYCHIATRY
AM 6-0630

224 E. Thomas Rd. Phoenix, Arizona

RADIOLOGY

R. LEE FOSTER, M.D., F.A.C.R., F.A.C.P.
MARTIN L. LIST, M.D., Radiologist

Diplomates of American Board of Radiology
Diagnostic Roentgenology

1313 N. Second St.
Phone ALpine 8-3484
Phoenix, Arizona

MARCY L. SUSSMAN, M.D., F.A.C.R.
Diplomate of American Board of Radiology

DIAGNOSTIC RADIOLOGY
THERAPEUTIC RADIOLOGY
RADIOISOTOPES

1130 E. McDowell Rd.
Phoenix, Arizona
ALpine 8-1601

540 Wells Fargo
Scottsdale, Arizona
WHitney 5-3959

JOHN W. KENNEDY, M.D.
F. S. TOLONE, M.D.
W. T. COOK, M.D.

Radiology, Diagnosis, X-ray and Cobalt Therapy

4550 N. 51st Avenue
Phoenix, Arizona 85031

SURGERY

Ernest D. Geever, M.D.

General Surgery — General Practice
1003 Division
Prescott, Arizona
445-1322

Pharmacy Directory

Fairmont Pharmacy

3231 East McDowell Road Phoenix, Arizona

PRESCRIPTIONS — DRUGS — COSMETICS — FOUNTAIN

BRidge 5-5719 FREE DELIVERY

In Scottsdale call
Lute's Scottsdale Pharmacy

For
PRESCRIPTIONS
WH 5-8420 — WH 5-8429
Next to the 1st National Bank



Pharmacy Directory

Serving Arizona
Health Needs
Since 1908

Ryan-Evans
DRUG STORES

Phoenix - Tucson - Scottsdale - Mesa - Tempe
Maryvale - Glendale - Westown - Sunnyslope
Paradise Hills - Carefree - Apache Junction
Globe - Miami - Casa Grande - Wickenburg

Classified

DOCTOR'S CENTRAL DIRECTORY

Helen M. Barrasso, R. N., Director
For Emergencies or in Absence of Your Doctor

CALL EA 7-7471

At Your Service 24 Hours Daily

2807 East Speedway Tucson, Arizona

"Established 1932"

DANNY T. SEIVERT INSURANCE

Malpractice & Non-Cancelable Disability
with Guaranteed Rates

Professional Programs for Professional Men

Del Webb's TowneHouse — Suite 1700
100 W. Clarendon — Phoenix
Telephone 277-1487

Classified

Private practice available for Board certified or Board eligible Internist at Cottonwood, Arizona. New hospital facilities available, plus office space. Estimated income of approximately $30,000 for first year. Any other necessary information please contact Roland W. Wilpitz, Administrator, Marcus J. Lawrence Memorial Hospital, P. O. Box 548, Cottonwood, Arizona 86326.

Attention: Immediate opening for physician interested in Group General Practice in Arizona. New clinic and hospital facilities. No investment or equipment necessary. Industrial connection allows immediate salary — $24,000 guaranteed. Will accept draft eligible physician. Write Drawer M, Miami, Arizona.

EENT Physician and Surgeon, Arizona license, age 55, desires to semi-retire and relocate. Would consider established practice or association. Reply Box 64-10, 4601 N. Scottsdale Road, Scottsdale, Arizona 85251.

Psychiatric Residencies: Northern California Mental Health Center. Two hours San Francisco; vacation area; warm dry summer days, cool nights; close to Pacific beaches. Three-year accredited program; broad training, research and community psychiatry orientation; 1965 APA Achievement Award. Flexible third year, wide variety affiliations. Housing. Starting salaries to $12,588 depending upon alternate plans. Apply: Chief of Professional Education, Mendocino State Hospital, Talmage, California.

Index to Advertisers

Ames Co., Inc.
Labstix 940
Arizona Highways Magazine 977

Bentley Sales
Doctor's Wallet 949
Bristol Laboratories
Tetrex-F 908
Tetrex 500 mg. 962, 963
Burroughs-Wellcome & Co., Inc.
Empirin 931

Camelback Hospital 945
Camelback Professional Bldg. 934
Classified 983
Coca-Cola Co. 968

Desert Realty Co., Inc. 977
Diagnostic Laboratory 934
Doctors' Central Directory 900
Dorsey Laboratories
Tussagesic 916

Eaton Laboratories
Furoxone 904, 905
Ely Lilly & Co.
Cordran Front Cover
Identi-Code[tm] 918

First National Bank of Arizona 958

Geigy Pharmaceuticals
Butazolidin 936, 937
Preludin 946, 947

Hobby Horse Ranch School 977
Hospital Medical Center 973
Hynson, Wescott & Dunning, Inc.
Lactinex 901

Lederle Laboratories
Declomycin 938, 939
Stresscaps 974
Tuberculin Tine Test 906
Loma Linda Foods
Soyalac 948

McBride Company 964
Medical and Dental Finance Bureau
Inside Back Cover
Medical Center X-Ray Laboratories 968
Merrell Co., The Wm. S.
Alertonic 950, 951
Moore & Sons Air Ambulance Service 930

National Casualty Co. 976
101 East Fourth Street Medical Bldg. 975

Parke, Davis & Co.
Benadryl Inside Front Cover
Pharmacy Directory 982, 983
Physicians' Directory 981, 982
Pitman-Moore Division of The Dow Chemical Co.
Novahistine-LP 978, 979
Poythress & Co., Inc., William P.
Trocinate 930

Robins, A. H.
Dimetapp Extentabs 909
Phenaphen 910

Safari Hotel 975
Searle & Co., G. D.
Dramamine 911
Sievert, Danny T.
Insurance 983
Smith, Kline & French
Dexamyl 942
Squibb, E. R.
Prolixin 932
Naturetin 972
Syntex Laboratories
Salesmen's Ad 913
Synalar 914, 915
Norinyl 916, 917

Trailor Construction Co. 952

Valley National Bank 976

Winthrop Laboratories
Neo-Synephrine 902
Wyeth Laboratories
Omnipen 970, 971

INDEX TO

Arizona Medicine
JOURNAL OF ARIZONA MEDICAL ASSOCIATION
MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO

VOLUME 23

JANUARY 1966—DECEMBER 1966

INCLUSIVE

INDEX TO PAGES

Pages	Issue
1-74	January
75-158	February
159-244	March
245-326	April
327-420	May
421-502	June
503-564	July
565-624	August
625-710	September
711-794	October
795-900	November
901-984	December

AUTHOR INDEX

January 1966 — December 1966

Anderson, Carl E: 399
Anderson, James W.: 180

Bigelow, D. Boyd: 655
Boyd, John: 91
Brown, Lee B.: 180, 577, 919
Bunting, William L.: 837
Butler, Byron C.: 359

Clemons, Bette: 927
Cloud, Daniel T.: 577
Cohen, Wlbur J.: 765
Crisp, William E.: 513

Davis, C. Truman: 173
Diserens, Robert: 577
DuVal, Merlin K., Jr.: 44, 119, 199, 301, 377, 463, 475, 539, 597, 671, 755, 871, 935

Espino-Vela, Jorge: 98
Elizabeth, Sister Regina: 34

Foster, John C.: 555, 615

Gilroy, John: 23

Hendrickson, Cloyd: 651
Hughes, Richard K.: 847

Jarrett, Paul B.: 371, 373, 535, 593, 667, 751, 869, 933

Kennedy, John W.: 275, 403, 485, 557, 618, 677, 697, 785, 882, 965
Kolins, Nathan S.: 453
Kravetz, Howard: 577
Kravetz, Robert E.: 439

Levine, Bernard E.: 655
Lim, Thomas P. K.: 365, 449
Linde, Leonard M.: 843
Lorenzen, Robert F.: 51, 123, 201, 303

McGrath, William: 125, 385, 603, 763, 873, 943
Mahorner, Howard W.: 191
Marcom, Elbert M.: 527
Maynard, Laurence S.: 524
Melick, Dermont W.: 405
Molthan, Marian: 577
Moore, Byron C.: 589

Nash, George: 26
Nelson, Arthur R.: 577, 919

Petty, Thomas L.: 655
Price, William: 91

Ramsay, Eric G.: 922
Reed, Wallace A.: 577
Rosenthal, Maurice: 651

Salsbury, Clarence G.: 283
Schoen, Roland F.: 311, 383, 467, 543, 599, 601, 673, 761, 723, 807, 907, 941
Schultz, Robert: 443
Schwartz, Wilbur: 30
Serbin, Arnold L.: 363
Shack, Monroe E.: 517
Shumway, Norman: 106
Smith, Leslie B.: 180, 547, 875
Stevens, Audrey D.: 279, 743
Sun, David C. H.: 353

Utzinger, Otto E.: 319

Ven den Broeck, Herman: 363

Waldstein, Sheldon S.: 735
Walsh, James M.: 319
White, Philip T.: 184
Winsor, Travis: 445
Witt, James S.: 524
Wood, MacDonald: 91

Bold Face Indicates Original Article

SUBJECT INDEX

Academy of medical science of Maricopa County, 487

AMA official visits Arizona, 143

Anemia of pregnancy, Megaloblastic, 837

Arizona Medical Association — Reports

- Arma liaison committee with the Arizona hospital association, 820
- Benevolent and loan fund committee, 167, 281
- Board of directors, 83, 345, 434, 639
- Federal services, Ad hoc committee on, 819
- House of delegates, Resume of the, 427
- Medical economics committee, 168, 644
- Medical education, Subcommittee on, 15
- Professional committee, 339, 725
- Publishing committee, 725
- Scientific assembly committee, 16
- **Territorial medicine publication, Ad hoc committee for Arizona, 85**

Arizona medical political action, committee appoints candidate selection committee, 487

Arizona's medical memories, 279, 743; — planning team: personnel, 119

Assignment vs. direct billing, 535

Autotransplantation of kidney with contralateral nephrectomy in dogs, 91

Barrow Neurological Institute, 66, 890

Blue Shield, 130, 315, 395, 555, 615, 471

Board of Medical Examiners, 235, 701

Bowel and bladder training, The scientific rationale of, 34

Cancer of the thyroid gland, 191

Cardiopulmonary resuscitation-revised statement, The closed-chest method of, 146

Cardiorespiratory failure, Principles of management of, 655

Cardiovascular problems in adolescence, 843

Changing face of health care — physicians, hospitals and graduate education, The, 922

Cigarettes, Please pass the, 405

Clinical facilities: functional design, 755

Coccidioidomycosis — outpatient clinic, Pulmonary, 363

Community health services, 555, 615; — relationships, Anticipating, 475

Convulsions, Prompt B6 diagnostic dose urged for all infants with, 488

Crippled children's services, 406

Dear Herb, 137

Dependents' medical care program, Expansion of the, 959

Diabetes detection drive, 859

Discipline and morale, A matter of, 667

Discouraging? Yes! Hopeless? No!

Doctors honored by tree planting, Yuma, 413; — move to have pharmacists label drug bottles, Family, 406

Draft changed, Medically allied, 234

Editorials

- Adjustment to marriage, 125
- AMA dues increase, 387
- American Medical Writers' Association, 51
- Annual meeting, 201
- Communication, 383
- Election — Nov. 8th, 723
- Health screening, 123
- Holiday Spirit, The, 907
- Identi-code, 673
- Lesser evil, The, 385
- Medical ethics, 371, 467, 543, 601, 677, 761, 873, 941
- Medicare is here, Caution, 547
- Name: doctor or physician, 875
- Nervous patient, 603
- Quackery, 209
- Sacrifice, 763
- 75 years later, 303
- Social policies for the nineteen seventies, 765
- Sunday night, 943
- Title XIX, 807
- This ain't no time to blow our cool, 599

Epilepticus, Status, 184

FDA would add 17 drugs to amphetamine-barbiturate controls, 223

Fedicare, 225

Bold Face Indicates Original Article

Functional islet tumor cured by surgical excision, 180

General practice, Arizona academy of, 145

Guilt through ignorance, 143

Health care dollar, Distribution of, 413

Heart association, Excerpts from the presidential address at the assembly of the American, 133

Hemorrhage, Hidden, an uncommon complication of a common operation, 919

Intestine, Drug induced ulceration and perforation of the small, 517

Is this where we are headed? 58

Lung cancer — diagnosis and treatment 1966, 847

Maricopa county medical society, 145

Matte, M.D. named to health post at UA, Paul, 234

Medical care for the Navajo tribe, Some observations on the development of, 283; — education in Arizona: A contemporary history, 301; — library, A, 199; — practice in Arizona, Early, 319; — school, Admission to, 871, 935

Medically indigent, Yuma officials to operate program for, 955

Medicare and labor, 59; —, Direct billing under, 693; —enrollment made easy, 138; —, Federal employees to get chance to join, 136; — for services of hospital-based physicians, Reimbursement under, 407; — ? not me!, Participate in, 224 —, Senate Bill 275 and, 953

Medicine and the Bible, 173

Meetings
Arizona Medical Association, 259, 492
Others, 67, 153, 237, 322, 495, 705, 789, 895, 973

Mental retardates, Prematurity and adaptive behavior in, 589

Mitral commissurotomy in children, 98

Multidiscipline laboratories, 463

Non-participation, 57

Nursing homes, Accreditation of Arizona, 66; — waits: "between things ended and things begun," 927

Obituaries
Adams, Mabel India, 469
Cobb, Virginia M., 607
Franklin, Henry LeRoy, 213
Gatterdam, Eugene A., 881
Grauman, Samuel J., 393
Hamer, Jesse W., 211
Hess, Delbert W., 131
Lindberg, A. Ludwig, 313
Mayne, Richard H., 393
Nelson, Donald E., 685
Nester, Murlin, 469
Phillips, Earle W., 605
Portmann, Ursus V., 606
Watterson, Robert P., 313
Williamson, G. Calvin, 549

Observations on tribe mimeae (penicillin-resistant) organisms, 651

Obstetrical and gynecological society, Tucson, 234

Oxygen in the blood, New method of measuring, 489

Pancreatic disease, Diagnosis of chronic, 353

Paratrooper — doctors, 486

Pesticide study in Arizona, The community, 524

Physiological sciences, The highlights of the 23rd international congress of, 365, 449

Planning for the first class, 377

Portioscope — a new diagnostic instrument, 359

Pulmonary embolism: diagnosis and treatment, Massive, 577

Reid, M.D. award recipient, Robert L., 65

Scholarship recipients, 954

Scottish teach-in marks troubles of the GP, 226

Social security and the doctor, 223

Southwestern preparatory school, 234

Squaw peak sketches, 275, 403, 485, 557, 618, 697, 785, 882, 965

State boards and state medical associations, 399

Stroke, Diagnosis and medical management of the acute, 23; —, Medical management of, 30; —, The surgical, 26

Teaching hospital, A, 597, 671

Tetralogy of Fallot, Total surgical correction for the, 106

Thyroid function tests, Pitfalls of, 735

Treatment, Old methods of, 319

Under the rug or out in the open? 478

University chancellor, The first, 275

Urinary pressure incontinence in the female, 513

Utilization committees, A study of the experience of, 527

Vietnam, Yuma physician off to, 406

Bold Face Indicates Original Article

THE LIBRARY
UNIVERSITY OF CALIFORNIA
San Francisco Medical Center
THIS BOOK IS DUE ON THE LAST DATE STAMPED BELOW

7 DAY LOAN

7 DAY
JAN 11 1969
1/13/69
RETURNED
JAN 15 1969

7 DAY
JAN 6 1970
RETURNED
JAN 2 - 1970

25m-10,'67(H5524s4)4315

205427